



WINTER 2011

GEO NEWS

Newsletter of the Association of Environmental
& Engineering Geologists, Carolinas Section

2009 and 2011 AEG Section of the Year

IN THIS ISSUE:

- Money for Nothing,
Contamination for Free*
with John A. Hodge 4
- New Rules for Inactive Industrial Hazardous Sites 9
- AEG Requests Nominations
for 2012 Outstanding Project
Award 9
- AEG Presidential Visits to
Carolinas Schools 14
- Student Geology Clubs 16
- Education Funding 18
- Field Symposium 21
- ASBOG Exam Seminar 22
- Shale Gas Symposium
Planned for 2012 25
- Haitian Water Well Project 26

INDEX ON PAGE 2

SAVE THE DATES!

THURSDAY, JANUARY 26 2012
AEG Carolinas Winter Meeting
*"Money for Nothing,
Contamination for Free"*
Featuring John A. Hodge.....4

THURSDAY, MARCH 29, 2012
AEG Carolinas Spring Meeting
Jahns Lecturer Scott Burns



GEONEWS WINTER 2011
Issue Date: December 21, 2011
TABLE OF CONTENTS

Articles

January 26 AEG Dinner Meeting in Concord features John Adams Hodge, "Money for Nothing, Contamination for Free"	4
AEG Requests Nominations for 2012 Outstanding Project Award	9
New Rules for Inactive Industrial Hazardous Sites by Doug Canavella, Pyramid Environmental and Engineering.....	9
Preliminary Announcement for a Shale Gas Symposium in Raleigh by Rick Kolb, Duncklee & Dunham	29
Haitian Well Project Update by Dave Duncklee, Duncklee & Dunham	29

Columns and Regular Features

Message from the Chair by Paul Weaver.....	3
GeoRamblings by Dr. Charles Welby.....	10
Announcements	27
Job Opportunities	27
AEG Carolinas Social Event Update	28

Education Section..... 14-26

AEG Presidential Visits to Carolinas Schools by Jennifer Bauer, AEG President	14
Letters from Randy by Randy Bechtel, NCDENR	14
Student Geology Club News	16
Jahns Lecturer Scott Burns to visit the Carolinas Section by Rick Kolb, Section Student Liaison.....	17
Help Needed! You can Encourage Participation in Scope Academy by Dave Duncklee, Duncklee & Dunham	18
Education Funding by Jennifer Bauer, AEG President	18
NCSTA Conference Report (with photos)	19
HELP STUDENTS! HELP AEG! by Serin Duplantis, AEG SYPSC	20
AEG Carolinas Field Symposium (with photos) by Rick Kolb, Section Student Liaison	21
Time for a Visit to your Alma Mater? by Rick Kolb, Section Student Liaison	25
ASBOG Exam Seminar Report (with photos).....	26

Upcoming Events

REDOX Conference (flyer).....	12-13
GSA 2012 (flyer)	31
Calendar of Events	34-35

Section and Association Stuff

Deadlines for Submittals	2
Section Officers.....	2
AEG Carolinas Treasurer's Report	6
AEG Carolinas Section Quarterly Board Meeting December 9, 2011—Minutes	7
AEG Student & New Graduate Member Membership Application (flyer)	36
AEG Membership Application (flyer)	37
Sponsor Application (flyer)	38
Thanks to our Sponsors!	39-40

GeoNews is a publication of the Carolinas Section of AEG. There are four issues per year, with deadlines and issue publication dates listed below. We publish news of the profession, technical articles, and job openings.

Deadlines for submittal to AEG Carolinas GeoNews

(can be flexible depending on events)

Spring – deadline March 1, issue date March 21
 Summer – deadline June 1, issue date June 21
 Fall – deadline September 1, issue date Sept.21
 Winter – deadline December 1, issue date December 21

Deadlines for submittal for the National AEG News:

March issue – January 15
 June issue – April 15
 September issue – July 15
 December issue – October 15

AEG Carolinas Section Current Officers and Contacts

Chair Paul Weaver, pmweaver@bellsouth.net
 Vice-Chair.....Brad Worley, brad.worley@summit-engineer.com
 Treasurer .. Alex Rutledge, frutledge@schnabel-eng.com
 Secretary Briget Doyle, bridgetdoyle@yahoo.com
 Membership Chair Frederick Love, Frederick.Love@TRS-Environmental.com
 Field Trip Chair.....Ben Draper, Benjamin_draper@golder.com
 Student Liaison..... Rick Kolb, rkolb0915@aol.com
 Social Committee Chair Adam Phillips, Adam.Phillips@sgs.com
 Past Section Chair Rick Kolb, rkolb0915@aol.com
 Advisor Jennifer Bauer, jennnbauer@gmail.com
 Advisor Gary Rogers, grogers@schnabel-eng.com

AEG Carolinas Section Website.....www.aegcarolinas.org

Webmaster Tami Idol, tami.idol@ncmail.net

AEG National Website..... www.aegweb.org**GeoNews Editor (2003-present)**

..... Jane Gill-Shaler (336) 883-0170
 cell (336) 687-6144
 JaneHGillShaler@gmail.com

Cover: Kristen Lloyd of AMEC and Butch Stevens of Parratt-Wolff at the NC State Student Field Symposium. See page 21 for article with lots of photos.

Disclaimer: © 2011 Association of Environmental & Engineering Geologists - All Rights Reserved. Views expressed in this publication are not necessarily those officially representing the Association of Environmental & Engineering Geologists except where expressly stated.

MESSAGE FROM THE CHAIR

By Paul Weaver, PG,
Carolinas Section Chair

The AEG Annual Meeting was held in September in Anchorage, Alaska with yours truly, Doug Canavello, Briget Doyle, and Jennifer Bauer in attendance from the Carolinas Section. The meeting was well attended with many interesting talks and presentations. Jennifer Bauer was installed as President of AEG at the meeting, and the Carolinas Section was awarded the Section of the Year. This is the second time in three years that we have won Section of the Year and you should all be proud of yourselves for being part of such a vibrant and vital section.

The Carolinas Section held a joint meeting with the ASCE Western Branch at Pack's Tavern in Asheville the end of September. We had approximately 80 people attend the meeting, and Jennifer Bauer gave a presentation on the landslide hazard mapping program. We were pleased to see many students in attendance including students from UNCC, UNCA, East Tennessee State, and Radford.

Our fall section meeting was held in Greensboro at Natty Greene's the latter part of October. Approximately 60 people attended this meeting to hear John Dill of Progress Energy speak about Progress Energy's nuclear energy program. As always, the meeting provided good food, good drink, good company, and chance to socialize with our many colleagues.

Our winter meeting will be held in Concord at Dave & Buster's on January 26. Please see the announcement on page 4 of this newsletter for more information. I hope to see you all there.

The Carolinas Section hosted two environmental and engineering geology field days this fall, one at UNCC and another at NCSU. Drilling equipment usage, soil logging techniques, and monitoring well construction were demonstrated for the students in attendance. I heard a lot of feedback from the students who attended essentially all saying how valuable it was to be able to see in person the processes that they had been discussing in class. A big "Thanks" goes out to Rick Kolb for organizing and overseeing both of the field days.

We took part again this year in the rock giveaway at the North Carolina Science Teachers' Association meeting in Greensboro in November. Thanks to Tami Idol, Brad Worley, Jane Gill-Shaler, and Gary Rogers (forgive me if I missed anyone) for helping us make this another huge success. Our section also, with the help of our sponsors and generous donations from members, purchased 450 Earth Science Tool Kits which we gave away to the earth science teachers in attendance at the NCSTA meeting. The teachers were all very appreciative, and the tool kits were all gone before half-way through the second day. We also helped sponsor the monetary awards for the Outstanding Earth Science Teachers of the Year which were presented at the NCSTA meeting. Our generous sponsors are all listed on the back two pages in this newsletter, and their ads are seen throughout. Please thank them when you see them at our next meeting!

The Geological Society of America (GSA) will be holding their Southeast meeting in Asheville and their annual meeting in Charlotte in 2012. The Carolinas Section is putting together a half-day symposium entitled "Practical Applications of Engineering Geology". We hope that we will have a big turn-out of our membership at this meeting. See page 31 for a flyer.

Other scheduled and potential events coming up in 2012 include the REDOX conference (see page 12-13 for a flyer) and possibly a geophysics short course in the spring, the AEG Annual meeting in Salt Lake City in September, and the GSA Annual Meeting in Charlotte in the fall. We are also investigating hosting a Shale Gas Conference next fall (see page 29 for the article). Please stay tuned with your GeoNews, AEG News, and email alerts for more information on these and other opportunities to expand your knowledge and to network with your colleagues.

By now, those of you who were members of AEG last year should have received your membership renewal notices. Please renew your membership as soon as you possibly can. It is mainly through your membership dues that AEG is able to carry out all of the work it does to further our profession. I would also like to send out a special invitation to those of you who were members of AEG in the past but have not renewed your membership for the

(Continued on page 6)



Drew Baird, P.G.
Southeast District Manager

115-B Broadus Avenue
Greenville, SC 29601

Tel: 864.240.9181 • Cell: 864.884.4346 • Fax: 864.240.9182
dbaird@regenesiS.com • www.regenesiS.com

Korey Drew
Account Executive

Pace Analytical[®]

Pace Analytical Services, Inc.
9800 Kinney Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Mobile: 704.315.8068
Fax: 704.875.9091
E-mail: korey.drew@pacelabs.com

**JOHN ADAMS HODGE ON
“MONEY FOR NOTHING, CON-
TAMINATION FOR FREE”
JANUARY 26, 2012**

The Association of Environmental & Engineering Geologists – Carolinas Section proudly presents **John Adams Hodge, P.G., Attorney at Law**, who was a sponsor of our 2010 AEG annual meeting in Charleston, SC.

Program: The Topic is *“Money for Nothing, Contamination for Free.”* This presentation examines the professional responsibilities of environmental professionals as enumerated in several recent court decisions.

Environmental consultants performing environmental site assessments (ESAs) can be liable for negligence and misrepresentation as a result of improper delegation or oversight in the assessment process. Although the All Appropriate Inquiry Standard (AAI) sets a minimum scope of work for conducting an ESA, environmental professionals must exercise reasonable judgment in indentifying data gaps and recognized environmental conditions at subject sites.

In another case, attempts by lawyers to claim privilege over environmental compliance reports, environmental data, and groundwater data and interpretation failed, resulting in the disclosure of thousands of pages of information to another party in a lawsuit. Strict rules exist for the establishment and maintenance of privileged communication between attorneys, clients, and consultant-experts. Failure to understand the scope of the rules governing privileges may result in the unintended release of internal documents, waiver of any privilege that might be claimed, and potential liability to the consultant and the client. Consideration of potential privileges should be made contemporaneous with the creation of a document or report, and consultants should be

made aware of the type of privilege claimed and the rules governing the maintenance of the privilege.

If time permits, a short discussion may ensue regarding the role of the geoscientists when called upon to provide expert opinions.

Bio: John Adams Hodge is an AEG member, a Professional Geologist in North and South Carolina, and a practicing environmental lawyer who resides in Columbia, SC. He was formerly an attorney with the South Carolina Department of Health and Environmental Control, and he recently left a large law firm and opened up his own practice. He is listed in America’s Best Lawyers – Environmental Law.



Mr. Hodge is also an environmental consultant and an Adjunct Professor in the Environment and Sustainability Program at the University of South Carolina in Columbia. For many years he taught a graduate course, Environmental Regulations and Planning, in the Department of Environmental Health Sciences at the University of South Carolina. His work focuses on environmental permitting and compliance, brownfields redevelopment, and site assessment and remediation.

Mr. Hodge has experience in virtually all environmental regulatory programs. He negotiated the first brownfields agreement in South Carolina, was a leader for the cleanup team engaged in the remediation of the Charleston Naval Complex, and obtained the original wetlands permits for the Boeing 787 aircraft assembly plant in Charleston.

He recently published an article on forecasting climate change in the *Sci-Tech Lawyer* and also published an article regarding the Deepwater Horizon oil spill in *The Environmental Law Reporter*.

He received a B.S. Degree in Geology from Duke University, an M.S. Degree in Marine Science/Geology and a J.D. Degree from the University of South Carolina, and a Certificate in Planetary Geology from Birkbeck College of the University of London.

Note to self: Send in membership renewal at www.aegweb.org

DIRECTIONS: Dave and Buster's, 8361 Concord Mills Blvd, Concord, North Carolina 28027, 704-979-1700

FROM THE SOUTH Take I-85 North towards Greensboro. Take the BRUTON SMITH BLVD exit, EXIT 49, toward CONCORD MILLS BLVD. Turn left onto SPEEDWAY BLVD. SPEEDWAY BLVD becomes CONCORD MILLS BLVD. Make a left into the Concord Mills Mall. Dave and Buster's is located at the western end of the mall facing Concord Mills Blvd.

FROM THE NORTH Take I-85 South towards Charlotte. Take the BRUTON SMITH BLVD/CONCORD MILLS BLVD exit, EXIT 49. Turn RIGHT onto CONCORD MILLS BLVD. Make a left into the Concord Mills Mall. Dave and Buster's is located at the western end of the mall facing Concord Mills Blvd.

MEETING DETAILS

Place: Dave and Buster's, Concord, North Carolina

Date: Thursday, January 26, 2012

Time: 6:00 PM social hour, 7:00 dinner, 8:00 speaker

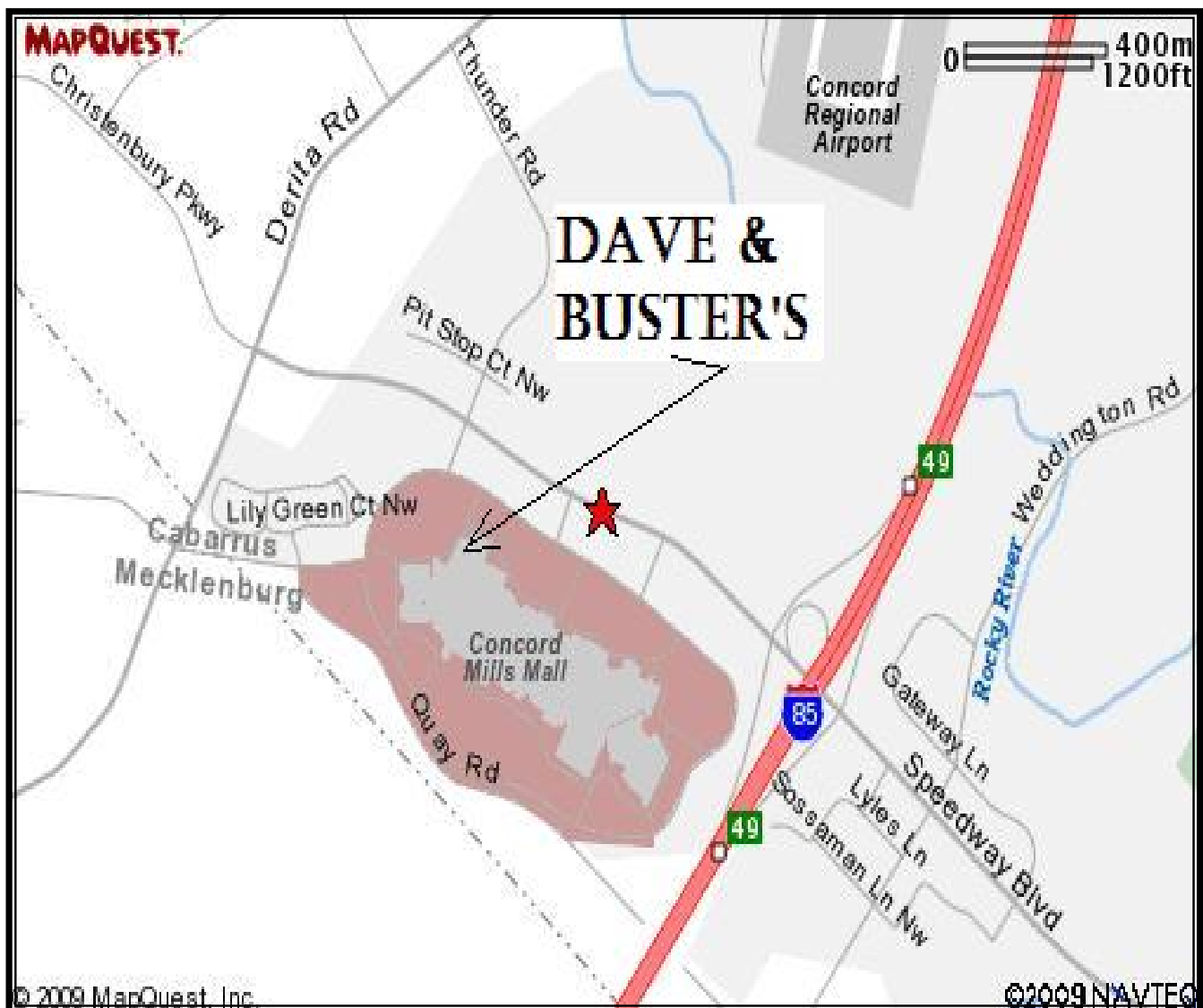
Program: *"Money for Nothing, Contamination for Free"*

Cost: AEG Members \$25, non-members \$30, students FREE with college ID, Teachers are \$10.

Reservations: Please make reservations with Brad Worley by Thursday, January 19, 2012

Phone: Brad: 919-631-3218 (cell)

Email: brad.worley@summit-engineer.com



AEG CAROLINAS SECTION 3Q TREASURER'S REPORT

By Alex Rutledge, Section Treasurer

BALANCE as of June 30, 2011

Checking Account	\$3,115.13
Money Market Account	\$21,657.84
	<u>\$24,772.97</u>

INCOME

Social Events	\$88.00
Sponsorships	\$250.00
Earth Science Kit Donations	\$750.00
Interest	
Money Market	\$2.60
SUBTOTAL - INCOME	<u>\$1,090.60</u>

EXPENSES

Dinner Meetings	
Asheville - Pack's Tavern Deposit	\$500.00
Meeting Cake	\$0.00
Social Events	
Durham Bulls Game	\$160.00
Educational Programs	
Earth Science Kits	\$2,958.00
Section Chair Flight to AEG Meeting	\$868.00
SUBTOTAL - EXPENSES	<u>\$4,486.00</u>

BALANCE TRANSFERS

Money Market Account to Checking Account	\$4,000.00
--	------------

BALANCE as of September 30, 2011

Checking Account	\$3,716.93
Money Market Account	\$17,660.44
TOTAL	<u>\$21,377.37</u>

(Message from the Chair—Continued from page 3)

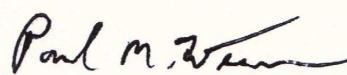
last year or several years... WE WANT YOU BACK!!

Please go on line at aegweb.org and come back into the fold; we need you and want you as full members, and to be perfectly honest, we need the membership dues that come with you being a member.

Finally, on a personal note, I would like to announce that at the end of October, I joined ESP Associates out of Fort Mill, South Carolina as their Geotechnical Engineering Transportation Department Manager. I will be mostly working out of my home in Greensboro when I'm not visiting clients or projects (you can't beat the commute!).

Thank you all for your membership and support of the Carolinas Section. As always, please feel free to contact me at the email address listed below with any ideas, concerns, comments, etc. that you have for AEG and the Carolinas Section in particular.

Sincerely,



Paul M. Weaver, P.G.
AEG Carolinas Section Chair
pmweaver@bellsouth.net



800-779-8854 / ContactUs@aedi.biz
NC, SC and VA Licensed and Certified
WWW.AEDI.BIZ

For All Your Drilling Needs

*Environmental - Geotechnical
Auger, Mud Rotary, Air Rotary, Geoprobe*

*Certified NC DOT "DBE" Women Owned Business
and HUB Corporation*

AEG CAROLINAS SECTION QUARTERLY BOARD MEETING CONFERENCE CALL

December 9, 2011. The meeting was called to order at 3:30 PM.

Attendees:

Paul Weaver (Chair)
Brad Worley (Vice-chair)
Briget Doyle (Secretary)
Alex Rutledge (Treasurer)
Adam Phillips (social Committee Chair)
Jane Gill-Shaler (Newsletter Editor)
Rick Kolb (Student Liaison)

Carolinas Section Treasurer's Report – Alex

- Has Jennifer Bauer been added as a signatory to the Carolinas Section account as per National requirements? Not yet.
- How much did we lose on the October section meeting at Natty Greene's? We lost \$311.00.
- Has our new pricing structure (\$30 for non-members) helped any to reduce our meeting losses? Yes

Section meeting is on January 26 at Dave & Buster's in Concord. RSVPs to be sent to Brad.

- Who all on the Board will be attending? Jane, Paul, Rick, Alex so far.

Meeting in Columbia

- Still trying to get something set up through Raymond. Nothing yet. He has been swamped with work.

Earth Science Tool Kits and Rock Giveaway at NCSTA meeting in November

- We gave away the 450 tool kits we purchased. There will be an article and photos in Winter 2011 GeoNews (See page 19). All the kits were given to teachers by a little after 11am the second day.
- Alex, what was the total amount of donations received for the tool kits and how much ended up coming out of the Section's money? We received \$1,250 in donations; cost to the section was \$1,700.

Outstanding Earth Science Teacher Awards at NCSTA meeting

- The Board voted and agreed to donate \$500 to the two OEST recipients
- Randy Bechtel approached me the day before the awards were to be given to tell Paul that one of their donors for the monetary award had backed out at the last minute leaving them \$100 short. There will be an article in Winter 2011 GeoNews (see page 14).

(Continued on page 8)



Simple | Powerful | Reliable

Real-Time Systems Maximize Remediation Progress

Characterize aquifers, track treatment progress, and conduct required sampling with rugged **In-Situ®** equipment.

- **Virtual HERMIT® Kit** streamlines groundwater testing.
- New **Rugged Tapes** and **Meters** measure water level, LNAPL, DNAPL, conductivity and more.
- **TROLL® 9500** with optical **RDO® DO Probe** offers robust performance for downhole remediation systems and for low-flow sampling.

For details, visit www.in-situ.com and call us at **1.800.446.7488**



In-Situ Inc. Innovations in Water Monitoring

(Winter AEG Carolinas Minutes, Continued from page 7)

- I wrote a check out of the Section's account for \$100 to cover the shortfall. There was a quorum, so Briget made a motion to approve Paul's expenditure, Paul seconded it, and Alex, Paul, Briget, and Brad voted aye.

GSA Asheville regional meeting March 31 (Saturday) through April 2 (Monday)

- The Carolinas Section is putting on a symposium entitled "Practical Applications of Engineering Geology" on Sunday and Monday.
- Brad and Paul are the conveners
- Abstracts are due by January 17. There will be about 10 talks; 6 are committed so far.
- We will have AEG booth at the meeting and will have some people to man the booth (any volunteers? Briget and Rick volunteered to man the booths.
- Paul is trying to get some information from the meeting committee in regards to what they need monetary sponsorship for. Does the adjunct Board think \$500 is reasonable? The board thinks it is reasonable.

GSA National meeting in Charlotte on November 4-12, 2012 (Sunday through Wednesday)

- We have offered to put on a symposium on "Practical Applications of Engineering Geology" and/or "Practical Applications of Environmental Geology" and they would like us to do this
- What level, if any, of financial sponsorship would we like to offer for this meeting?

Annual membership renewals

- We need to be thinking about the best way to assure renewals and get people who haven't renewed in the last year or so to do so...Any ideas? Check with National, and renew early.

Scholarships from Carolinas Section

- Board voted to grant \$500 for a student to attend the annual meeting, \$500 for a student to attend school, and \$500 for a student to attend field camp.

- Paul is trying to get this set up with the AEG Foundation but has not received any response from them as of the date of this conference call. Briget will call Patty Bryan, of AEG Foundation in January, and see about writing a charter for the scholarship. Some suggestions were to make the scholarship only available to a student member of our section.

Carolinas Section Social Committee

- Rick, is anything going on in regards to the monthly gatherings at micro-breweries? Rick reported that 8 people met in Raleigh and went to a Durham Bulls game. He will try to set it up to do a social event in late January and early April or May.
- Adam Phillips is trying to organize a social at a Hurricanes hockey game and other events.

South Carolina Membership involvement

- One of the initiatives Paul wants to undertake in his second term as Chair is to greatly increase our South Carolina membership's involvement in the Section
- The possibility of trying to establish a South Carolina chapter has been brought up. Any thoughts? Briget reported that there are only about 10 professional members in SC, and about 20 student members, primarily from Furman and Greenville and Charleston.

Redox conference

- Dave reported to Paul that they need two more email blasts. Registration is ahead of schedule, and AEG gets a free booth at the conference. (see flyer pages 12 and 13)

Geophysical One-Day Short Course

- We are working with Matt Howe of the Southeastern Section to try and set up a one-day short course on geophysics similar to the course that was offered at the Charleston annual meeting
- The idea is to have a day in Atlanta and another in either Raleigh or Charlotte
- A survey will be sent out shortly to the membership of both sections to judge interest in the course, the preferred dates, and the preferred day of the week.

(Continued on page 29)



Douglas A. Canavello, P.G.
President

503 Industrial Ave. (27406)
P.O. Box 16265
Greensboro, NC 27416-0265

(336) 335-3174 ext. 121
(866) 545-9507
Fax (336) 691-0648
doug@pyramidenvironmental.com
www.pyramidenvironmental.com



Monitoring & Recovery Well Specialists

JASON MANTAK

176 Commerce Boulevard
Statesville, NC 28625
jmantak@gexnc.com

Tel: 704-872-7686
Fax: 704-872-0248
1-800-752-8853

AEG REQUESTS NOMINATIONS FOR 2012 OUTSTANDING PROJECT AWARD

The AEG 2012 Annual Meeting Planning Committee is seeking nominations for the 2012 Outstanding Environmental & Engineering Geologic Project Award.

The Outstanding Environmental and Engineering Geologic Project Award was established in 1993 to recognize a project that meets the following criteria:

- Displays national or international significance;
- Demonstrates the application of the principles of environmental and engineering geology to the solution of a problem affecting the public;
- Shows recognition of and respect for the environment, history and culture of the project area;
- Provides an opportunity for public education in:
 - environmental and engineering geology,
 - environmental issues, and culture and history of the area.

Nominations should be submitted to Phil Goble, pgoble@utah.gov, and **must be received by December 30, 2011**, and Formatted according to the Conditions and Procedures available by clicking [here](#). Questions may be directed to Phil Goble, pgoble@utah.gov, 801-536-4044.

NEW RULES FOR INACTIVE INDUSTRIAL HAZARDOUS SITES

By Doug Canavello, Pyramid E & E

Cleanups at industrial sites can now qualify for remediation using risk-based cleanup standards. Certain site conditions and the proposed remediation strategy must fit the guidance of this new program in order to be eligible. The new rules are part of legislation passed in NC General Statutes N.C.G.S. 130A-310.65 to 310.77 and apply to groundwater remediation in the IHSB (Inactive Hazardous Sites Branch) program and other hazardous waste programs.

To implement the strategy, a clear assessment of the extent of contamination must be completed along with all potential exposure routes identified and evaluated. The contamination must be contained on site at the start of the risk-based remediation. An eligibility application must be filled out with appropriate technical data, and a site specific application fee must be paid for the site.

The implementation of these rules is complex. Pyramid, as a DENR designated Registered Environmental Consultant (REC), can provide additional details and interpretation concerning your site. If this program looks like it will work for you or you just want to investigate the possibilities, please contact Doug Canavello, LG or Mike Jones LG, RSM, at (336) 335-3174. We would be glad to discuss the current status of your project.



TRS-Environmental is your leading source for environmental testing and monitoring equipment.

From our 24-hour technical support and high availability to centralized distribution coupled with a leading-edge logistics capability, we are your essential partner when it comes to delivering the equipment you need anywhere, any time.

Order Online at: www.TRS-Environmental.com

Frederick Love

E-Mail: sales@trs-environmental.com

1830 West Airfield Drive, P. O. Box 619260

Dallas-Ft. Worth Airport, TX 75261

Phone: 800.532.3381

Fax: 972.456.7011



GEORAMBLINGS

By Dr. Charles W. Welby

In early November I attended the Annual Water Resources Conference of the American Water Resources Association in Albuquerque, NM. The scenery around Albuquerque brought back memories of previous trips through and visits to Albuquerque as well as enjoyment of the scenery below from commercial flights over the area while in transit from the eastern U.S. to the West Coast during the last half century. The meeting brought the usual networking with friends in the organization as well as a visit with a graduate of the NCSU geology program who works at the Museum of Science in Albuquerque and has been involved as a team member for interpretation of imagery coming back from Mars.

One of the lasting memories of Albuquerque is related to a trip through Albuquerque sometime shortly after the end of the Ordovician. It involves geomorphology and structural geology in a broad sense and a round about way plus a little bit of "corn," I suppose. A few days prior to the event described below my wife and I had read an article in the old Life Magazine about how the New Mexico Highway Patrol was using airplanes to enforce the highway speed limit of the time, 35 mph, about maximum for a 1939 Plymouth with some miles on it.

As one approaches Albuquerque from the west on Old Route 66, famed in song and wall paper (yes, wall paper), one reaches a spot where Route 66 begins to drop into the Rio Grande River valley and Albuquerque. My wife and I were driving east on a Labor Day weekend and approaching Albuquerque late in the afternoon when a New Mexico Highway Patrol plane came along checking on the speed of the traffic as it approached Albuquerque. I was watching the geologic scenery, and my wife was driving, maintaining a speed of 35 mph. So as the topography changed to a drop into the Rio Grande River Valley, my wife maintained the 35 mph, and low and behold, there a short distance down the slope were 5 or 6 New Mexico Highway Patrol cars and the associated troopers parked perpendicular to the highway probably eager to have a chat with some recalcitrant motorist who did not

pay attention to the posted speed limit. So the moral of the story, if there is one, state troopers do not always hide behind bill boards and do on occasion take advantage of things geological in their safety programs.

Geology while not described in great detail in most of the AWRA papers was an important factor in the discussions related to addressing water supply problems and management of water supplies. Among the interesting ideas was that of re-use of water and how to move the water to the subsurface and through the sediments used as the "pipeline." Also, concepts associated with conservation of water supplies were important points of discussion. Most of the ideas associated with re-use had built into the process a geologic component as water was moved from the surface into the ground. Protection of water supplies was a broad topic of interest.

For this column my observations and comments are to provide only a sampling that is based upon my particular interests in the subjects discussed at the meeting. Several sessions were devoted to projects, experiments, ideas related to recharge to groundwater, especially through the use of Artificial Recharge Basins (ARB). Below you will find some short summaries of several papers that were of interest to me.

Basins and Becker described use of fiber optics to sense temperature in the water in an Artificial Recharge Basin. The temperature pattern provides evidence of the water movement through the base of the Recharge Basin.

Bral and Atkinson discussed the pretreatment of South Platte River water prior to its being brought into the water supply for Aurora, CO. A series of wells was installed in alluvial sediments adjacent to the river with the wells drawing the water through the banks of the Platte River. The water from the wells is placed into infiltration basins. Another series of wells "sucks" the water out of the basins through the alluvial material in which the basins lie. This volume of water is then sent to the water treatment plant for finishing prior to distribution to the public.

Robert Dykes and others described an evaluation of the water supplies in the eastern Snake River region, both surface and groundwater, upstream from the American Falls Reservoir. The area is complex geologically, and water moves in a complex fashion between the surface and groundwater. The objective of the study was to evaluate the vulnerability of surface water supplies within each of 13 Hydrologic Units studied and to rank them into 5 categories ranging from "endangered to secure."

For me, given the previous GeoRamblings column, an especially important paper was that of Denise Fort, "Importing Water. How to Think About Energy and Sustainability." The author notes that the "California Water Project uses 2 -3% of all water consumed in the state."

One important point made which is often overlooked is that the energy cost of alternatives to importing water must be considered before final decisions are made. It is important to recognize and give thought to, among other things, that water already available with its energy re-

(Continued on page 11)

Stop Guessing... Know What's Down Inside Your Well

**Water well
video,
analysis, and
repair**

**Geophysical
Surveys**

EGIS, PA

Mike L. Vaught, PG, CWC

(919)929-8363
441 Northside Dr.
Chapel Hill, NC 27516
gwinvest@juno.com

GeoRamblings (Continued from page 10)

quirement is needed to acquire new water. This energy requirement should be compared with the energy requirement for reclaiming water and putting the reclaimed water to use economically and in an environmentally appropriate way. When one thinks about water problems, renewable energy becomes an important factor in water use and the water cycle.

Deborah Hathaway and Gilbert Barth in their paper, "High-resolution modeling of groundwater responses to stream flow and channel conditions in New Mexico," described the number of factors that are included in the models. The main factors included are the effect of variable river hydrographs and channel conditions on shallow groundwater elevations and on river seepage losses.

Rick Henry in his paper, "Restoring floodplain function and an alluvial aquifer in a distributary river system: Managed aquifer recharge through surface infiltration in the Walla Walla Valley," describes the effect of the modification of distributary channels of the Walla Walla River on groundwater levels. He also discussed the projects where there was recharge to the groundwater by use of spreading basins.

John Jansen described the use of geophysical surveys

to explore for basins for artificial recharge or to characterize the geology below places where basins might be placed. He mentions two electrical geophysical methods that are particularly useful for choosing a site for a recharge basin: High Resolution Electrical Resistivity Survey and Time Domain Electromagnetic Induction (TEM) Survey.

Up to January 31, 2012, the Conference Proceedings will be available at the AWRA Web Site with the following address: <http://www.awra.org/Annual2011>. After that date AWRA non-members will have to contact AWRA Headquarters, American Water Resources Association, 4 West Federal Street, Middleburg, VA 20118-1626, (540) 687-8390 for information about gaining access to copies of the Proceedings.

Q.E.D.

Charles W. Welby

Dr. Charles W. Welby is a former Section Chair for AEG Carolinas and a regular contributor to this newsletter. He may be reached at cww_ral@hotmail.com.



Pine Environmental Services, Inc.

THE ENVIRONMENTAL SUPPLY & SUPPORT PEOPLE
RENTALS - SALES - REPAIRS

WWW.PINE-ENVIRONMENTAL.COM



The Leading Supplier of Environmental Monitoring, Environmental Sampling and Safety Supplies

Ask us about free delivery and pick-up in your area

Toll Free: (866) 646-PINE (7463)

email: Pine-NC@Pine-Environmental.com

For After Hours Emergency needs Call

Paul Federline (919) 333-6287

Dedicated to Quality and Customer Satisfaction



REDOX TECH, LLC



THIRD BIENNIAL SOUTHEASTERN *IN SITU* SOIL AND GROUNDWATER REMEDIATION CONFERENCE 2012

Redox Tech, with sponsorship from the Association of Environmental & Engineering Geologists (AEG) Carolinas Section, is again organizing the Biennial Southeastern *In Situ* Soil and Groundwater Remediation Conference.

The conference will be held on March 6th and 7th 2012 in Raleigh, North Carolina, returning to the Renaissance Marriott at North Hills.

Past attendance at this conference has exceeded 200. The conference will provide a forum for providing the state of the art for a wide range of *in situ* remediation technologies. On the first day of the conference, recognized speakers from around the country will present on their area of expertise. On the

second day, case studies will be provided by consultants and vendors on the application of emerging technologies, with lessons learned.

The Conference should provide a valuable opportunity for groundwater professionals to keep abreast of recent developments in remediation technologies, while potentially earning continuing education credits. Also, be sure to visit the AEG Carolinas Section booth or visit the following website to join AEG online or print a membership application <http://www.aegweb.org/i4a/pages/index.cfm?pageid=3327>

CONFERENCE DETAILS

Pre-registration will be available Monday the 5th from 6 to 8 pm. Display booths will be set up at this time also.

DAY ONE AGENDA:

7:30 to 9:00 a.m.	Breakfast (provided with registration) and Registration
9:00 a.m. to Noon	Morning Invited Speakers
Noon to 1:00 p.m.	Lunch provided with Registration
1:00 to 4:30 p.m.	Afternoon Invited Speakers
4:30 to 6:00 p.m.	Evening Social and Poster Session

DAY TWO AGENDA:

7:30 to 8:30 a.m.	Breakfast (provided with registration)
8:30 a.m. to Noon	Morning Accepted Speakers
Noon to 1:00 p.m.	Lunch provided with Registration
1:00 to 4:00 p.m.	Afternoon Accepted Speakers

COST

The cost of registration for the conference is \$250, and includes continental breakfast, coffee and tea at breaks, and lunch. The evening social is a cash bar, but light snacks will be provided. Discounts are available for AEG members, students or State Employees (reduced rate of \$200). Each participant will be responsible for their own dinner and lodging. Redox Tech is the promoter and main sponsor of the conference, with AEG Carolinas Section as co-sponsor, none of whom are directly profiting from the conference. The cost covers direct costs such as the conference room, lunch, beverage, snacks, and A/V equipment rental. Participation is limited to the first 250 registrants. Registration is fully refundable up to one week prior to registration, less an administrative fee of \$25. If you cannot attend, your registration may be transferred to another participant. Single day registrations are not available. Your credit card will be charged at the time of registration.

REDOX TECH, LLC



ABSTRACT SUBMISSION

Limited spots are available for presentations by vendors and consultants. Abstracts must be submitted by December 2, 2011 in electronic format to abstract@redox-tech.com. Notification of acceptance will be made by December 16th, 2011. Presentations materials for selected abstracts must be provided by February 28th to be included in the program

SPONSORSHIP AND DISPLAY BOOTHS

Display booth areas are available on a first-come basis for \$950. Access to an electrical receptacle is \$50 additional with limited availability. The cost includes two registrations with full access privileges. We have room for 16 booths. The exact layout has not been determined. We are seeking sponsors for the social hour on Tuesday, March 6th and breakfast on each of the mornings. Sponsorship cost is \$300 and includes prominent display of your company name and logo.

Sponsorships are available on a first-come basis. There will be an end-of-day raffle, and we are seeking gifts to raffle from vendors and consultants. Display booths will be charged to credit cards one month prior to the conference. For Booth registration, please contact us via phone at 919-678-0140 for information.

HOTEL

The conference is being held at the Marriott Renaissance Raleigh Hotel in North Carolina - [Renaissance Raleigh North Hills Hotel](#). The hotel is a reasonable drive from the Raleigh Durham Airport (RDU). The hotel does not offer free shuttle service, but it does have free parking. A block of rooms has been reserved at a discounted pre-registration rate of \$169 per night. Simply use the link above, check availability, and the discounted rate will appear. The block of rooms is being held until February 10, 2012. There are other hotels in the area, but if you need a room, reserve early because they may be limited.

REGISTRATION INFORMATION

Name _____
(Name as you wish it to appear on your badge)
Company _____
Address (City, State, Zip) _____
Phone (office) _____ Fax _____
Email _____
PAYMENT METHOD (Payment MUST accompany this registration form)
Payor : _____ Company _____ Individual _____
Check (Payable to REDOX TECH, LLC) _____
Credit card: _____ Mastercard _____ Visa _____ Corporate card? _____
Card Number _____ Exp. Date _____
CVV Number (the three digit code on the back of card) _____
Name on card (Print) _____
Card billing address (City, State, Zip) _____
Cardholder's signature _____

MAIL completed
registration form to:
Redox Tech, LLC
200 Quade Drive
Cary, NC 27513

or FAX to: 919-678-0150
Attn: Conference

or EMAIL to:
conference@redox-tech.com

For Booth Registration, contact
us via phone at 919-678-0140
for information

EDUCATION SECTION

AEG PRESIDENTIAL VISITS TO CAROLINAS SCHOOLS

By Jennifer Bauer, AEG President

My Presidential visits to Wake Tech, UNC-Chapel Hill, and NC State University on Dec. 1 and 2nd were quite successful. There were around 30 students at both the Wake Tech and UNC presentations. There were around 45 attendees at NCSU.

At Wake Tech I spoke to **Gretchen Miller's** intro class of Thursday at 1:15. There were three attendees that are considering majoring in geology and I stayed around, with **Tyler Clark** (former Carolinas Section Chair and now Secretary/Treasurer of the Carolina Geological Society) to chat with them about geology as a career. They have decided to join. Another thing to note is one student made a comment that even though she doesn't intend on going into geology, she now knows more about geology and landslides since she attended my talk. So we are educating general members of the citizenry and not only our own, I'm happy to say!

At UNC, the audience was a mix of faculty and graduate students with around 5 undergraduates. Unfortunately I missed a good portion of the social gathering before the talk at 4pm because my time at Wake Tech ran over and I didn't leave when I had hoped I would. Nevertheless, there were good questions after the talk and people seemed engaged. One student came up to say he was already an AEG member and had attended one of the field techniques symposia (see article on page 21). He said he really enjoyed that and learned a lot. He was talking about geoprobes and one of the professors had no idea what a geoprobe was. Perhaps the professors should be attending these demonstrations too! I was treated to dinner Thursday evening by **Drew Coleman** and **Allen Glazner** in Chapel Hill.

I spoke to **Karl Wegman** and **Jim Hibbard's** Geohazards class of Friday morning. There were a few faculty in the room, and **Randy Bechtel** from the N.C. Geological Survey stopped by to listen in, too. There was a good discussion after the talk and I've been contacted by a student since the talk interested in interning already. I left AEG recruitment posters at all of the schools (the ones the Student and Young Professional Support Committee put together).

Thanks to the AEG Carolinas Board for supporting this effort. I appreciate all you do for AEG! My only suggestion for next time is to advertise these visits to the general membership, too. I think some members may be able to arrange their schedules to go to the schools to see a talk they might not be able to attend at the Section meeting.

Jennifer Bauer is President of AEG. She may be reached at jennbbauer@gmail.com.

LETTERS FROM RANDY

By Randy Bechtel, NC Geological Survey,

Outstanding Earth Science Teacher (OEST) and Educator (OESE) awards

As President of the Southeastern Section of the National Association of Geoscience Teachers (SENAGT) and North Carolina manager of the Outstanding Earth Science Teacher (OEST) and Educator (OESE) awards I would like to thank **AEG Carolinas Section** for being the newest co-sponsor of both awards and for assisting at the last minute to provide additional support when funding for one award came up short.

As part of the 2011 awards, AEG provided \$250 for each winner to cover travel and registration expenses to the N.C. Science Teachers Association meeting. Brad Worley was at the awards ceremony (and handed out NCDOT core at the booth) where I was able to recognize the Carolinas Section of AEG as the newest sponsor. I know the winners appreciated this and I hope that this can be a regular offering for these awards. Be sure to check out the associated websites below for this year's winners.

The 2011 winners are:

2011 OEST N.C. State Winner: Mr. Tim Martin, Greensboro Day School, Guilford County, N.C. <http://academic.greensboroday.org/~martint/>
Sponsored by: National Association of Geoscience Teachers; North Carolina Geological Survey; North Carolina Mining Commission; Carolinas Section Association of Environmental & Engineering Geologists.

2011 OESE N.C. State Winner: Dr. Andy Heckert, Appalachian State University, Watauga County, N.C. <http://www.geology.appstate.edu/museum/rockgarden/rockgarden.htm>

Sponsored by: North Carolina Geological Survey; Carolinas Section Association of the Environmental & Engineering Geologists; North Carolina Aggregates Association; Southeast Section of the Society for Mining, Metallurgy, and Exploration.

2012 Awards: The NOMINATION DEADLINE for the OEST and OESE awards is March 9, 2012

If you know of an Outstanding Earth Science Teacher (OEST) or Educator (OESE), please fill out the nomination form or nominate yourself. http://www.geology.enr.state.nc.us/proj_earth/proj_earth.html

To see more about the 2011 winners and to nominate a deserving teacher or educator for the 2012 awards, go to the N.C. Geological Survey website at http://www.geology.enr.state.nc.us/proj_earth/proj_earth.html N.C. Science Teachers Association (NCSTA)

(Continued on page 15)

EDUCATION SECTION

(Letters from Randy—Continued from page 14)

NCSTA featured the AEG Earth Science Week Kit Giveaway and N.C. Aggregates Association Rock Giveaway along with numerous geoscience education presentations. Over 850 rock kits and all of the rock samples were distributed. There were between 10-15 geoscience education related presentations.

Many of the presentations were standing room only showing that teachers want and need geoscience education. Unfortunately, many of the sessions were scheduled at the same time so teachers had to choose which geoscience presentation they wanted to attend and could not get to all of them.

Next year, I plan to organize a room dedicated just to geoscience education and activities. This way the order and content of the programs can better be organized and scheduled. This will also make it easier for the teachers to find the room. Next year NCSTA will be in Winston-Salem November 8-9, 2012 (NOT Greensboro) right after the national GSA meeting in Charlotte Nov 4-7, 2012!!

Geoscience Education Calendar – look for these events in March/April and November 2012:

Southeastern Section, GSA 61st Annual Meeting, April 1–2, 2012 <http://www.geosociety.org/Sections/se/2012mtg/> Abstract deadline January 17, 2012 Theme session #7 - Building the Foundation for Geoscience Education a Next Step. Working with expert earth science teachers to create more highly qualified earth science teachers.

Session description: The geologic community needs to provide educators with age-appropriate resources as well as generate educational opportunities -- discussion, activities, and community participation. The foundation of education begins in the elementary school (K-5) where the most assistance is needed because teachers are least prepared to teach science.

The middle and high school levels (6-12) have a shortage of geologically knowledgeable teachers, and all levels have pressures to teach to the End-of-Grade and

End-of-Course tests. Many times geology is pushed aside because of these pressures. These high school graduates are then ill prepared to be successful in college level science courses or make appropriate decisions regarding health, safety and economy in an era with increasing misinformation and disinformation.

More highly qualified earth science teachers are needed to teach and mentor students and new, or geologically inexperienced, teachers to understand the interconnectedness of geology over a wider range of topics than identifying rocks and minerals and learning the layers of the Earth.

Industry, Government and Academia can support teachers by providing understandable information in an understandable format so that real world connections can be made. Another aspect to this process is the adoption of the newly revised National Curriculum and the Race to the Top program. We encourage educators and geoscientists to submit their best practices for engaging students, teachers and the public in Earth Science education.

Possibly a full week of geoscience education in November 2012!?!

National GSA meeting in Charlotte November 4-7, 2012 <http://www.geosociety.org/meetings/2012/>

NCSTA Winston-Salem November 8-9, 2012 (NOT Greensboro); we are considering presenting a workshop and/or field trip for teachers that following weekend – more to come.

If you have any questions, please don't hesitate to contact me via phone or email.

All the best,

Randy

Randy Bechtel, CEE
Project Geologist - Environmental Education
Randy.Bechteler@ncdenr.gov
NCGS website: <http://www.geology.enr.state.nc.us/>
[P] 919.807.4187 [Please note new phone number.]
[C] 919.448.5967



Mark Lassiter, P.G.
President

Two United Way
Greenville, South Carolina 29607
Phone: (864) 288-1986
Fax: (864) 288-2272
E-mail: mlassiter@aedrilling.com

EDUCATION SECTION

GEOLOGY CLUB NEWS

The North Carolina State University Geology Club

NCSU Geology Club has been busy this semester. Our focus has been on professional education and development. Each month we are trying to bring in a practicing geologist from each functional area of professional geology, to speak to our students, and give them some insight into possible career paths. To that end we've brought in an environmental and engineering geologist. We are planning on bringing in petroleum, mining, and geoscience education professionals in the coming months.

We started off the semester by detailing our goals and assigning committees. We have been and will continue to be active in geoscience education outreach. We will assist with Boy Scout merit badges, and are active in the College of Physical and Mathematical Sciences student council.

We've had the opportunity to partner with AEG in several wonderful educational opportunities. We participated in a Professional Geologist Licensure information course provided by AEG, as well as the field techniques symposium. Several of our students also attended the

recent AEG dinner meeting in Greensboro.

We've gone on several field trips for classes, including one to the Dome Upheaval in Arches National Park over fall break, and the Carolina Geological Survey field trip in the Sanford basin. We are grateful for all of the support and guidance the AEG has provided us, and look forward to a great spring semester.

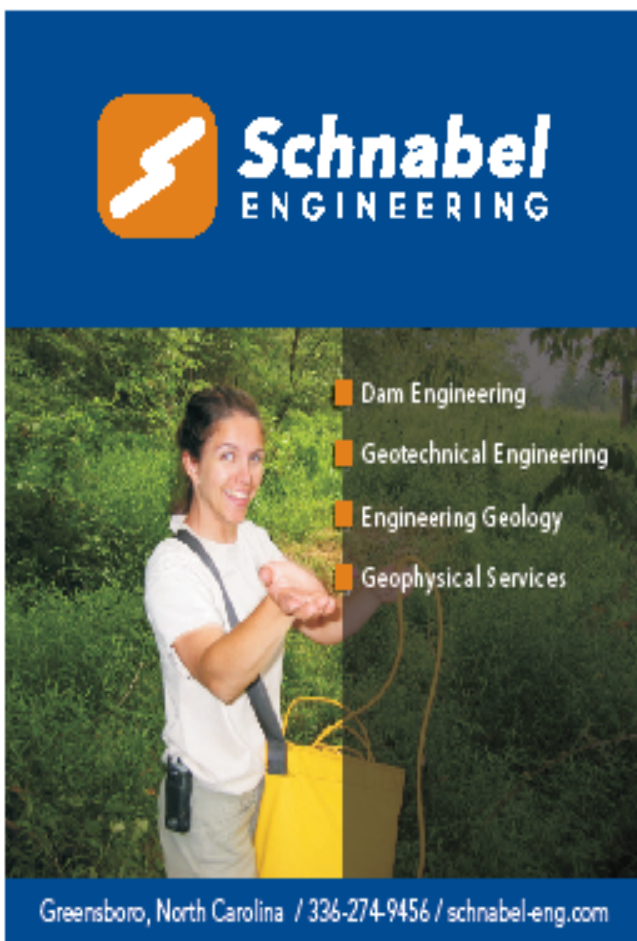
Earl Wells, President
North Carolina State University Geology Club
AEG Student Chapter
earlwells82@gmail.com

Carolina Geology Club (UNC-CH)

The Carolina Geology Club has been asked by a citizens group in the Chapel Hill area to help them with a publication dealing with the geology of Bolin Creek. We also do service projects on campus, and will soon work with a group of Cub Scouts trying to earn their geology merit badges. We go hiking and camping at least twice each semester, including trips to Stone Mountain and Oconee Mountain, and we're looking to head down east this winter, maybe to Cliffs of the Neuse or Lake Waccamaw.

Members of the Carolina Geology Club have attended nearly every AEG function offered in the fall, as well as the 2011 Carolina Geological Society meeting in Aberdeen. The Carolinas Section of AEG has made a lot of great things happen for us, and we're excited to work with you in the future! We meet Wednesday nights at 7:00 in the old library in Mitchell Hall. Everyone, including alumni and professionals, is welcome to attend any meeting or event.

Jason Hallman, President
Carolina Geology Club
jahallma@email.unc.edu



Schnabel
ENGINEERING


- Dam Engineering
- Geotechnical Engineering
- Engineering Geology
- Geophysical Services

Greensboro, North Carolina / 336-274-9456 / schnabel-eng.com

Travis Bowman
Sales Associate

ChemRem International LLC

PO Box 1239
Davidson, NC 28036
Cell: (704) 728-5800
Toll Free: (877) 243-6736
tbowman@chemrem.com
www.chemrem.com



EDUCATION SECTION

JAHNS LECTURER SCOTT BURNS TO VISIT THE CAROLINAS SECTION

By Rick Kolb, Section Student Liaison

The 2011-2012 Jahns Lecturer, Dr. Scott Burns, will visit the Carolinas Section in March and make presentations at five universities and at the spring section meeting in Raleigh. Scott is a Professor of Geology at Portland State University (PSU), where he specializes in environmental and engineering geology, soils, geomorphology, Quaternary geology and terroir. He is in his 22nd year of teaching there and has over 40 years of experience teaching at the university level, with previous positions in Switzerland, New Zealand, Washington, Colorado and Louisiana.

An author or co-author of two books, over 80 articles, and over 200 published abstracts, Scott has worked on research topics as diverse as landslide, debris flow, radon and earthquake-hazard mapping, heavy metals and trace elements in soils, loess stratigraphy, slope stability, Glacial Lake Missoula Floods, bio-geomorphology (pocket gophers, tree throw, and ants), alpine soil development, and terroir (i.e., relationship of geology, soils, climate and wine).

Scott received his B.S. and M.S. degrees from Stanford University and his Ph.D. from the University of Colorado. He holds registrations in Oregon (RG and CEG) and a license in Washington (LG). Scott also is a consultant and an expert witness for law cases. Scott was president of AEG in 2002-2003 and vice president (North America) for IAEG in 2006-2010. He has been the Chair of the EGD and the Treasurer of the Quaternary Geology and Geomorphology Division of GSA for 12 years. Scott has been an Associate Dean, chair of departments and president of faculty senates at three different universities, and president of one of the largest and oldest Rotary clubs in the world. Scott has won many awards for outstanding teaching. He actively helps local TV and radio stations and newspapers bring important geological news to the public.

The Jahns lectureship was established in 1988 and is sponsored by AEG and GSA's Engineering Geology Division. Its purpose is to provide funding for distinguished engineering geologists to present lectures at colleges and universities in order to increase awareness of students about careers in engineering geology. The lectureship is named in honor of Dr. Richard H. Jahns (1915-1983), an engineering geologist who had a diverse and distinguished career in academia, consulting and government. The Carolinas Section has hosted the Jahns Lecturer for the past five years.

The talks Scott offers are 1) Urban Landslides – Challenges to Forensic Engineering Geologists; 2) Cataclysms on the Columbia, the Great Missoula Floods; 3) Engineering Geology Challenges on the Cascadia Margin, Pacific Northwest, USA; and 4) The Mystery of Terroir – the Relationship of Geology, Soils, and Climate to Wine. Scott's tentative schedule for presentations during his visit to the Carolinas:

Monday, March 26	College of Charleston
Tuesday, March 27	University of South Carolina, Columbia
Wednesday, March 28	UNC - Wilmington
Thursday, March 29	North Carolina State University – Raleigh
Thursday evening	Carolinas Section spring meeting, Raleigh
Friday, March 30	UNC - Charlotte

AEG members are welcome to attend Scott's presentations at these universities. When finalized, details of his visits at these schools will be in our spring newsletter and online at www.aegcarolinas.org.

Rick Kolb, Duncklee & Dunham, is a former Chair of the Carolinas Section, and is currently Section Student Liaison for the Carolinas Section of AEG.

Visit us at www.kbmobilelabs.com



Kelly Bergdoll
President

KB LABS, inc.
6821 SW Archer Road
Gainesville, FL 32608

Voice: 352.367.0073
Fax: 352.367.0074
Mobile: 352.538.0721
email: kellyb@kbmobilelabs.com

Mobile Laboratory Services

State Certified WMBE
NELAP, NC, SC, NJ Certified



Joyce Engineering, Inc. is a full-service consulting firm. We provide engineering & environmental solutions to private & public clients throughout the Southeastern United States.

Hannu Kemppinen, Client Services Manager
Joyce Engineering, Inc., 2211 W. Meadowview Road
Greensboro, NC, 27407
phone and fax # (336) 323-0092

hkemppinen@joyceengineering.com

EDUCATION SECTION

HELP NEEDED! YOU CAN ENCOURAGE PARTICIPATION IN SCOPE ACADEMY

By Dave Duncklee, Duncklee & Dunham

The NCSU Physical and Mathematical Sciences Foundation, of which I am a Board Member, will again host Scope Academy, on April 14, 2012. You may recall we tried to enhance minority participation in this event last year, but time was short and for whatever reason we did not have much success.

We strongly encourage any AEG Carolinas members, professionals, teachers, or students, to help with this! The intent is to excite young students in the fields of chemistry, physics, statistics, mathematics, marine, earth and atmospheric sciences, etc.

The event will be held in the new SAS Hall building on North Campus. Link and speaker list - <http://www.pams.ncsu.edu/weekend/> Thanks for your interest!

EDUCATION FUNDING

By Jennifer Bauer, AEG President

Are you looking for ways to fund that research or education project you've been working on? Check out the North Carolina Office of Environmental Education grant list here.

You'll find grant opportunities ranging from Science Education to Sustainable Energy to grants recognizing educators. Check it out! (<http://web.eenorthcarolina.org/core/item/topic.aspx?s=0.0.108.37430&tid=85010>)



YOUR LAB OF CHOICE

C - Customer Focused
H - Honest
O - Open
I - Innovative
C - Committed to Excellence
E - Environmentally Responsible

Find out more about us at:

www.esclabsciences.com

or contact: Barry C. Kroll
 Sales Manager – East Region
bkroll@esclabsciences.com
 (704)614-2660

CHOICE ENVIRONMENTAL SERVICES

www.choice-enviro.com

RENTALS & SUPPLY SALES

WATER QUALITY, WATER SAMPLING, AIR MONITORING,
& SOIL SAMPLING

NICOLE MANNING
 919-369-1001 (DIRECT)
 919-363-6890 (FAX)
NICOLE@CHOICE-ENVIRO.COM

**WE ALSO RENT THE KAWASAKI MULE 3010
 TRANS 4X4 XUV!**

BACKPACK & HANDHELD GPS, GEM 2000, TVA 1000B, SURVEY
 EQUIP., GENERATORS, LAPTOPS, ANEMOMETERS, MONSOON
 PUMPS, PERISTALTIC PUMPS, BLADDER PUMPS & NOISE
 DOSIMETERS & LOTS LOTS MORE!

YSI
HORIBA
RAE
IN-SITU
PHOTOVAC
ISCO
LAMOTTE
QED
QUEST
TSI
LANDTEC
TRIMBLE
SOLINST
PROACTIVE



**Environmental
Conservation Laboratories**

Cary, NC Lab:

ENCOCRY@encolabs.com

Tel: 919-677-1669

Fax: 919-677-9846

Orlando, FL Lab:

ENCOORL@encolabs.com

Tel: 407-826-5314

Fax: 407-850-6945

Jacksonville, FL Lab:

ENCOJAX@encolabs.com

Tel: 904-296-3007

Fax: 904-296-6210

Corporate Office:

10775 Central Port Drive,
Orlando, FL 32824

EDUCATION SECTION

NCSTA CONFERENCE

By Jane Gill-Shaler

A big thank you for all of the AEG Carolinas volunteers, and those from other organizations, who helped bag rocks from the North Carolina Aggregates Association and hand out AGI Earth Science Kits at the North Carolina Science Teachers Association (NCSTA) conference on November 9-11, 2011. Thanks also to the wonderful, generous AEG Carolinas Sponsors, who provide the funding for this project. Thank you!

I received a very nice note from Diane Weems and Jay Stem, NCAA Executive Director. Diane spent the three days of the conference with a painful broken foot, soldiering on regardless!

*Dear Jane (and AEG Carolinas volunteers);
Thank you for your help with the North Carolina Aggregates Rock & Mineral Exhibit on November 9 - 11, 2011, in Greensboro. We could not have done it without you! You can be pleased that your participation helped put rock kits and other classroom resources into the hands of over 800 teachers, for which they are grateful.*

Thank you again! We hope you have a Merry Christmas and a safe and happy New Year.

With warmest regards,

Jay Stem and Diane Weems

North Carolina Aggregates Association



The many, many buckets of rock samples awaiting bagging. Jay Stem, ExDir of NCAA, is on the left.



Paul Weaver, AEG Carolinas Section Chair, and Diane Weems, NCAA, showing one of the 450 AGI Earth Science Kits that we all handed out to NC science teachers.



Jane Gill-Shaler, AEG Carolinas and Cynthia Bennett, Forsyth Gem and Mineral Club, bagging rock samples.



Bagged rock samples at the NCSTA Conference, awaiting the opening bell and the stampede of resource-starved teachers.

EDUCATION SECTION

HELP STUDENTS! HELP AEG!

By Serin Duplantis, AEG SYPSC

Are you trying to increase student involvement with your Section/Chapter? Have you been looking for a way to reach out to students? Are the costs or lack of ideas standing in your way? Well, SYPSC wants to help you! The Student and Young Professional Support Committee (SYPSC) can help you – why not try the Visiting Professionals Program (VPP)?

The objective of the VPP is to provide college students with first-hand information on what life is like for environmental and engineering geologists. Through this volunteer program, you (as individuals or a group) can visit college geology departments – make presentations on case histories, or host a career Question & Answer session, or facilitate a field methods workshop, or create your own activity!

This is a fantastic way to spread the word about the profession and AEG, and have a great time doing it! A number of AEG Sections have participated in the VPP Program, including the Carolinas Section and Washington

Section, reaching out to students from coast to coast.

The SYPSC offers funding to reimburse you for your travel and related activity expenses. We are also able to assist you with finding contact information for the college or university you wish to visit and help you with ideas for activities.

Or, you're searching for a way to help students but there isn't a college or university nearby? Well, SYPSC can help you with that too, we are always looking for volunteers!

The SYPSC works on programs that help undergrads and graduate students learn about AEG, and younger professional members make the transition from student to professional.

The time commitment is very reasonable, one-hour monthly conference calls and some contributions of your time and energy towards committee action items. That's it! And you'll help make a big difference for students and young professionals in AEG.

Please contact **Serin Duplantis** (serin.duplantis@gmail.com) or **Nichole Wendlandt** (nwendlandt@gfnet.com), SYPSC Co-Chairs, for more information or to join! See also the article by Rick Kolb (*Time for a Visit?*) on page 25.

FOR ALL YOUR **LABORATORY** TESTING NEEDS



SGS North America

Environmental Services

5500 Business Drive

Wilmington, NC 28405

910 350 1903

www.us.sgs.com/environment

SGS IS THE WORLD'S LEADING
INSPECTION, VERIFICATION, TESTING
AND CERTIFICATION COMPANY

WHEN YOU NEED TO BE SURE

SGS

EDUCATION SECTION

FIELD TECHNIQUES SYMPOSIA BIG SUCCESS!

By Rick Kolb, Section Student Liaison

As written elsewhere in this newsletter, the Carolinas Section has been visiting college campuses for five years to make presentations on careers in environmental and engineering geology. Naturally, a good part of our presentations discuss field work, and we often discuss in detail what we do when we advance borings and construct and sample wells. We understand, having trained beginning geologists, that it's difficult for students to envision what goes into field work, even when we show them PowerPoint slides of these activities during our presentations. For several years, I've been thinking we should simply take the students into the field and show them. The St. Louis Section conducted a field day several years ago, and the student reception was highly positive. After years of simply thinking about it, I decided it was time to go the



Matt Flinchum (in hard hat) shows UNC-Charlotte students how we acquire and describe soil in a Geoprobe acetate sleeve

Nike way and just do it.

I contacted **SAEDACCO** and **Parratt-Wolff**, two drilling contractors that have long been section sponsors, and **Troxler Geologic Services** and asked if they were willing to provide drill rigs and Geoprobes for free for Saturday sessions in Charlotte and Raleigh. **Pete Byer** of SAEDACCO, **Butch Stevens** of Parratt-Wolff, and **Ben Troxler** said yes without hesitation. I asked for free use of field-measuring devices from **Enviro-Equipment** of Charlotte and **Pine Environmental** of Raleigh, both section sponsors, and immediately received approval for free use of PIDs and water-level indicators. I asked section sponsor **Environmental Conservation Laboratories** for a cooler full of sample bottles, which they readily pro-

vided. I selected two weekends in the fall when I hoped the weather would be dry and there were no NC State football games. We scheduled UNC-Charlotte for October 29 and NC State for November 12.

About a month before the planned dates of the sym-



Brandy French discusses soil borings with UNC-Charlotte students

posia, I prepared an announcement, which I sent out to my faculty and geology club contacts at the schools in North and South Carolina. I knew we'd need most of a day to conduct all the things we wanted to do, and then have a barbecue dinner at the end. However, I didn't want to start too early on a Saturday morning, knowing too early a start time on a Saturday morning might curtail attendance. I chose 11:00 AM, with the contractors and AEG helpers being in the field at 10:00. I limited attendance at each session to 30 students so that all the activities would be easily visible to everyone, knowing we'd be operating two stations simultaneously. Thus, we had 15 students at each station. We charged each student \$5 to partly offset the cost of the dozens of doughnuts and coffee to start each day and the barbecue to end it. I hoped that this nominal charge wouldn't preclude people from attending, but I

(Continued on page 22)



ROBERT "BUTCH" STEVENS
VICE PRESIDENT

PO BOX 1029, 501 MILLSTONE DRIVE, HILLSBOROUGH, NC 27278
(919) 644-2814 (800) 627-7920 FAX (919) 644-2817
bstevens@pwinc.com www.pwinc.com
EAST SYRACUSE, NEW YORK (800) 782-7260
ENVIRONMENTAL AND GEOTECHNICAL DRILLING SERVICES

EDUCATION SECTION

(Continued from page 21)

thought if we made it free, people would sign up and then not show up.



Paul Weaver (in hard hat and blue jacket) describes geotechnical borings to UNC-Charlotte students

UNC-Charlotte

AEG members **Matt Flinchum** of Duncklee & Dunham in Cary and **Brandy French** of URS in Charlotte volunteered for UNC-Charlotte, their alma mater. Both are environmental geologists. Section chair **Paul Weaver** of ESP Associates volunteered for UNC-Charlotte; Paul was our geotechnical geologist. October 29 came. The day before in Charlotte, it rained all day, and rain wasn't supposed to end until noon on Saturday. Would the students look at the weather forecast and simply stay in bed? As Matt and I drove to Charlotte that morning, it was raining hard. But by the time we arrived in Charlotte, the clouds had begun to break, and by 11:00 AM it was partly

cloudy and soon clear. It turned into a gorgeous fall day in the 60's. We had 34 students and faculty preregister, all from the geology and civil engineering departments at UNC-Charlotte. Amazingly, all but two students showed up, and one of those had to go sample stormwater for his job. So 11:00 was not too early.

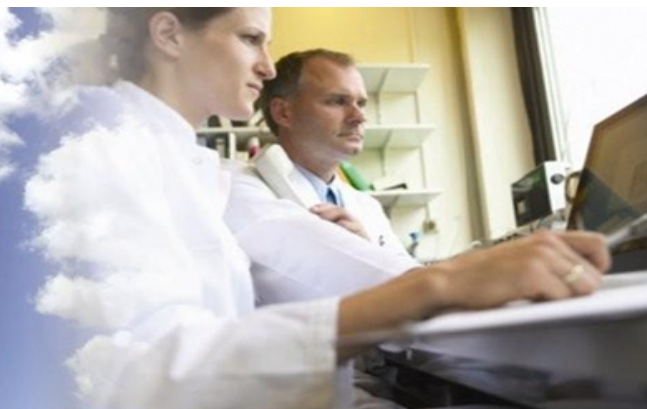
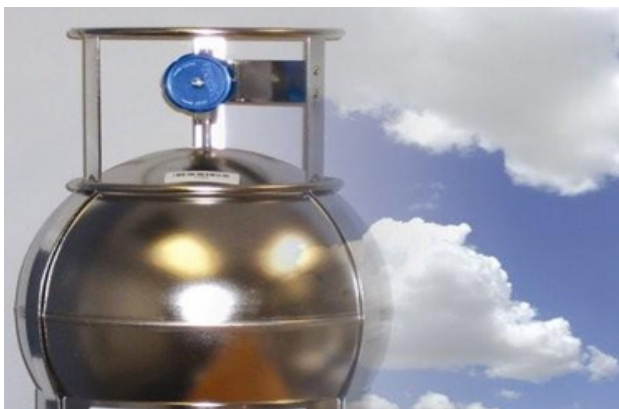
After dozens of Krispy Kreme doughnuts and coffee, our session began with introductions of our drilling contractors, who discussed their rigs. We then discussed the health and safety plan, and reviewed a typical proposal for field work. Here's what we showed the students during the field day:

- Advance borings with a drill rig using hollow-stem augers and collect soil samples from split spoons

(Continued on page 23)



Paul Weaver (in hard hat and blue jacket) describes soil to UNC-Charlotte students



SOIL

WATER

AIR

FULL SERVICE ENVIRONMENTAL LABORATORY • QUALITY DATA & SUPERIOR SERVICE
ON-LINE DATA MANAGEMENT—LOCAL REPRESENTATION—SMALL WOMEN-OWNED BUSINESS
Tom Veratti, 617-640-4424 tveratti@contestlabs.com



EDUCATION SECTION

(Continued from page 22)

- Advance soil probes with a Geoprobe and collect soil samples from the acetate sleeves
- Fill laboratory containers with soil samples collected by these methods
- Screen soil samples with a photoionization detector
- Collect soil samples for geotechnical testing; push a Shelby tube
- Construct temporary wells in borings advanced with hollow-stem augers, using PVC riser and well screen
- Develop wells by bailing
- Sample wells with bailers
- Construct temporary wells in probe holes, collect groundwater samples pumped through tubing
- Fill laboratory containers with groundwater samples



The barbecue after the field day at UNC-Charlotte

- Complete a laboratory chain of custody
- Gauge depths to the water table with an electronic meter
- Abandon the borings and wells

UNC-C had asked beforehand if we could make the wells permanent for future use in classes, so SAEDACCO completed two wells with flush-mounted covers. SAE-DACCO abandoned the two wells constructed with the Geoprobe. At the end of the sunny day, we had a barbecue dinner, with lots of leftovers for the students to take home. The workers were thanked many, many times by both the students and faculty. The day was a complete success with no unexpected occurrences in the field. How often does that happen?



Brandy French shows Joanna Harbison and other UNC-Charlotte students how we bail wells

NC State

AEG member **Kristen Lloyd** of AMEC in Greensboro and soon-to-be AEG member (I'm still working on him) **Clark Wipfield** of Dunklee & Dunham volunteered for the session at their alma mater. Kristen volunteered two days before our field day, when another person suddenly couldn't make it. I love Kristen's response to my email asking her to help: "You know what, yes I will do it. Outreach is such a great thing and I wish we had this sort of thing in place when I was in school. It would have been super helpful and a great learning resource". You gotta love geologists, no?

November 12 arrived as a sunny, cool day to start but quickly warmed up to shirt-sleeve weather. We had 40 students preregister, but four cancelled before Saturday and one had to work. In the end, we had 33 students and faculty attend (only two no shows!). We had students

(Continued on page 24)



Clark Wipfield and Ben Troxler discuss soil characteristics in samples from Ben's Geoprobe

EDUCATION SECTION



Clark Wipfield (in sunglasses) discusses soil in acetate sleeve with NC State students

(Continued from page 23)

from NC State, East Carolina, Radford (not a short drive for them), UNC-Chapel Hill, Wake Tech and Duke. We conducted this day almost identically to the day in Charlotte, with minor tweaks learned from Charlotte. Dunkin' Doughnuts and coffee to start this time. We realized in Charlotte that two borings and wells by each method were adequate. Similar to what we did at UNC-Charlotte, Parratt-Wolff completed the two wells they constructed as



NC State students had opportunities to try their hands at bailing

permanent to allow Master's candidate and AEG student member **Earl Wells** to conduct aquifer testing in the field area, which was adjacent to a hog lagoon. He learned that it's pretty difficult to conduct this testing in one-inch wells, which was all he had in his field area. He was quite happy to have these new wells, and was so enthusiastic he wanted to conduct the slug test right then and there.

Afterwards, we had a great barbecue dinner (better than the one in Charlotte, though both were great) and many hung around until we finished at around 4:00 PM.

Once again, as in Charlotte, students and faculty were very expressive in their appreciation for the field day. The response from both field days was overwhelmingly positive, which begs the question, should we do these field days periodically? Do you want to give a little back to your profession? Contact Rick Kolb if interested in something similar for next year, maybe at a different school(s).

I thank SAEDACCO, Parratt-Wolff, and Troxler



NC State students had opportunities to gauge water

Geologic for volunteering their drilling equipment and staff for the field days; Enviro-Equipment and Pine Environmental for the field equipment; and ENCO for the cooler with sample containers. All of our section sponsors made possible the doughnuts and barbecue, and I thank all of them for their continued support. Most of all, I thank Matt Flinchum, Brandy French, Paul Weaver, Kristen Lloyd and Clark Wipfield for taking a Saturday and spending it with future geologists. Without these volun-

(Continued on page 25)



Kristen Lloyd describes the drilling and sampling process to NC State students

EDUCATION SECTION

(Continued from page 24)

teers, the field days would not have been possible. Likewise, volunteers lead the Carolinas Section and have made it one of the best in AEG. We urge you to consider volunteering to help improve the section. Contact any of the section board members listed on page 2 of this bulletin if you are interested. Remember, any organization is only as strong as its volunteers.



Kristen Lloyd shows a split spoon to NC State students



NC State students inspect drill cores

TIME FOR A VISIT TO YOUR ALMA MATER?

By Rick Kolb, Section Student Liaison

Spring semester has started, and it's time to plan our visits to geology departments at schools in North and South Carolina. The Carolinas Section has conducted Visiting Professional visits since 2007, and our members have visited nearly every school in North and South Carolina. Approximately 30 AEG members have presented at these visits.

We visit the larger universities every year, and the remaining schools every other year or so, depending on the school's desire. During these visits, we start off with pizzas and soft drinks as an enticement for the students to attend, and follow with presentations by two or three AEG members that talk about each of their specialties.

Commonly, these presentations are on a Thursday night, starting at 6:00, and we have an engineering geologist, an environmental geologist, and a geologist from the public sector (e.g., NCDENR, NCDOT, NCGS). Generally, our presentations last 1½ to 2 hours.

The students are very receptive to the information we bring, commonly ask many questions and always express their appreciation for the information we provide. Our presentation styles have ranged from off the cuff to PowerPoint shows; we have no requirement for the format. The goal is to provide a view of what life is like as a practicing geologist; students do not get this information from their schools.

Are you interested in participating? We have found that graduates of the schools at which we present enjoy returning to their former haunts to talk to students, and as graduates of these schools, they relate to students well and vice versa.

If you're interested, contact Rick Kolb, who organizes these visits, at (919) 858-9898 or rkolb0915@aol.com, and ask questions and/or express your interest.

Note to self: Send in membership renewal at www.aegweb.org.
Or fill out application on page 37.

EDUCATION SECTION

ASBOG GEOLOGY EXAM SEMINAR IN RALEIGH

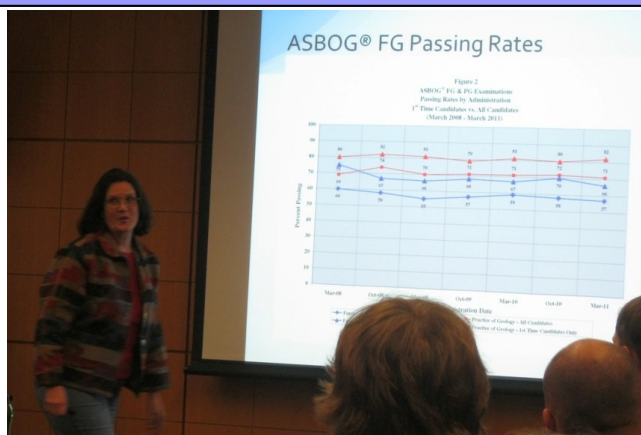
By Rick Kolb, Section Student Liaison

The Carolinas Section hosted a seminar on the Fundamentals of Geology (FG) exam offered by the National Association of State Boards of Geology (ASBOG). We invited students from across the state for the seminar held in Jordan Hall at North Carolina State University on November 10, 2011.

In attendance were 22 students from NC State, Duke, UNC-Chapel Hill and Wake Tech. Presenters were Daphne Jones, L.G., of the Cary consulting firm Duncklee & Dunham and Dr. Richard Spruill, L.G., a professor at East Carolina University and President of ASBOG.

Dr. Spruill presented first and discussed the importance of licensure, provided a history of ASBOG and the North Carolina Board for the Licensing of Geologists, and discussed the statistical analysis undertaken on the tests.

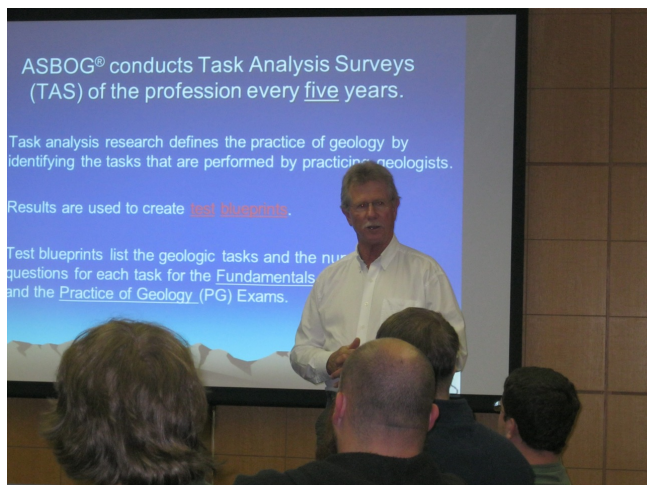
Daphne had taken and passed the exam in the spring and provided the students with information on registering



Daphne Jones, L.G., of Duncklee & Dunham

for the exam, an introduction to the exam, a preview of what test-takers will see on the exam, a discussion on what the test environment is like, many suggestions for test-taking strategies, and an overview of study aids and for-profit review classes.

The students asked many questions of both Dr. Spruill and Daphne and left the seminar with a lot of information advice on the exam process. They expressed their appreciation for the time we spent and the insight into the exam.



Dr. Richard Spruill, L.G., President of ASBOG, provides information on ASBOG to seminar attendees.

GARCO, Inc.

Environmental, Industrial & Recycling Services

P.O. Box 1907
Asheboro, NC 27204
www.egarco.com

Al King

Sales Representative
alk@egarco.com

† 336.683.0911
c 919.451.3960

GEOPHYSICAL SURVEY INVESTIGATIONS

Greensboro, North Carolina

336-286-9718 denilm@bellsouth.net www.geo-survey.com

Providing quality geophysical investigations at economical costs to the engineering & environmental industries



Geophysical Services

- Electromagnetics
- Ground Penetrating Radar
- Magnetometry
- MASW Seismic
- Refraction Seismic
- Resistivity Survey
- Utility Clearance

JOB OPPORTUNITIES

SCHNABEL ENGINEERING

The Greensboro office of Schnabel Engineering is looking for a geologist to join their team.

As Staff Scientist, you will support field investigations for geophysical, environmental, dam, and geotechnical projects in a team environment with engineers, geologists, and CAD/GIS personnel. You will be responsible for field data collection, environmental and geotechnical sampling, compilation of data, performing analyses, and report writing. Proficiency in computer usage, typical office software applications, and specialty engineering and/or geosciences software are also required.

The ideal candidate shall have a degree in geology, geophysics, or related field. Must be willing to travel for extended field projects. Must be capable of lifting and carrying heavy equipment. Good communication and organizational skills and a desire to work in a team-oriented environment is a must for those applying.

We offer extremely competitive compensation and benefits packages. Schnabel is dedicated to excellence in technical quality, teamwork and client satisfaction, and supports its employees in professional development towards these goals. To learn more and apply online, please visit www.Schnabel-Eng.com.

AA/EOE

Schnabel is a proud AEG Carolinas Gold Sponsor.

DUNCKLEE & DUNHAM

Geologist / Office Assistant Position

Hours: Monday - Friday (hours will vary between 10 and 40/week)

Hourly Rate: \$10.00 to 15.00

Respond to: Detailed cover letter and resume to dave@dunckleedunham.com.

Description:

This is a part time position without benefits with hours ranging from 10 to 40 a week.

The geologist/ office assistant position is a part time to permanent position in our Cary, NC office. Job duties include the compilation of environmental reports, data entry, document scanning, management of databases, assisting office personnel with answering the telephone, learning how to maintain field testing instruments, and performing general errands.

If proficient at these duties, job opportunities should progress to assisting field geologists and project managers with the collection and compilation of field data and the preparation of site maps using AutoCAD and GIS software. If progression to field work occurs, this would include the utilization of field-testing instruments; soil, groundwater and surface water sample collection; and field documentation procedures.

Field work will take place in varied weather conditions and rough terrain. Progression to a field geologist

ANNOUNCEMENTS

Con-Test Analytical Laboratory is proud to announce the Grand Opening of our new south east service center in Charlotte! This office will provide a centralized location for sample kit preparation, shipments to and from our Massachusetts laboratory, and scheduling of delivery via our daily courier services.

Con-Test provides the very best quality and value in the environmental and industrial hygiene analytical business. Our clients benefit from our high commitment of quality, reliability in data delivery, timely turnaround and excellence in client services. With over twenty-five years of experience, our dedicated staff provides you with the most consistent and accurate results possible.

We are located at Charlotte Commerce Park, 4109 J Stuart Andrew Boulevard, Charlotte, NC 28217. Please stop by for a tour or contact us directly; Becky Wood, (704) 883-6924, or Tom Veratti, (617) 640-4424. Visit us on the web at www.ConTestLabs.com. ConTest Labs is a proud AEG Carolinas Gold Sponsor.

position will necessitate the completion of OSHA training for hazardous site operations, and medical monitoring requirements.

Requirements:

- * Undergraduate (B.S. preferred) or graduate degree in geology.

- * Ability to use ArcGIS, Microsoft Office suite, Adobe suite and computers preferred.

- * Excellent written and oral communication skills.

Individuals selected for conditional offers of employment must be able to pass a physical examination including drug and alcohol testing. A driver's history check is conducted for applicants applying for jobs requiring a valid North Carolina Driver's License and/or CDL. A background check is also conducted.

This company seeks diversity in the workplace. Duncklee & Dunham is an equal opportunity employer.



A&D Environmental

Scott Pearce
Vice President

P.O. Box 484
High Point, NC 27261
P: 336.434.7750
F: 336.434.7752
C: 336.803.1783

spearce@adenviro.com
www.adenviro.com

CAROLINAS SECTION BREW PUB SOCIALS FOR WINTER 2012

By Rick Kolb, Duncklee & Dunham

The Carolinas Section of AEG held their first Brewpub Social in Raleigh at the Boylan Bridge Brewpub in October. It was a beautiful fall afternoon to gather outside and discuss geology, work, families, politics and whatever topics came to mind. Although attendance was not overwhelming, we had not expected a large number, this being our first attempt. Those that attended enjoyed themselves. We decided not to have socials in November and December due to the holidays, but we're ready to start again. We will hold our second and third socials events in the first quarter of 2012. Obviously the weather may not allow us to gather outside, but we can socialize inside just as easily.

Social for January

At the suggestion of an AEG-meeting attendee who is not currently an AEG member (we're working on him), we will hold our first social of 2012 starting at 6:00 PM on Thursday, January 19 at the Bull City Burger and Brewery, a locally owned, independent restaurant located at 107 East Parrish Street in downtown Durham. Bull City opened last March and serves lunch and dinner with approximately 90 seats inside plus 35 seats of outside patio dining.

According to their website (www.bullcityburgerandbrewery.com): The restaurant is very much "farm-to-fork," working closely with North

Carolina pasture raised beef farmers supplying beef with no hormones added and antibiotic-free meat that we grind daily to make our hamburgers and all-beef hotdogs. We work with other farmers growing vegetables such as tomatoes, cucumbers for pickles, and lettuce. The menu is streamlined with most items produced on-site including house-made buns, sauerkraut and bacon. We use no artificial sweeteners, no high fructose corn syrup, and no hydrogenated oils. We like to say we are like fine dining in a burger joint. We make the mustard, the slaw, the pickles, the mayo, the aioli, the hotdogs, the relish, the...&tc.

We are also a full scale working brewery and brew our own beer. We have up to eight beers on-tap at any given time creating fresh ales and lagers rotating seasonally throughout the year. We use just malt, hops, yeast and water to craft our beer, leaving out adjuncts and additives. We take wine seriously and feature farmer-made, estate grown and bottled wines from around the world, which are served on-tap via the Enomatic self-serve wine-dispensing machine.

Central to Bull City Burger and Brewery's core values is sustainability; our attempt is to operate while leaving the smallest energy footprint possible. Our long-term goal is to become part of a cycle of energy with the restaurant playing an integral role in the farms we source. Grain left over from the brewing process will feed locally farmed pigs that provide pork bellies to make our bacon, and the fry oil will become bio-diesel to fuel vehicles.

Social for February

We will leave the Triangle for our second social and head west to the Triad for our second social of 2012, which will start at 6:00 PM on Thursday, February 23 at Foothills Brewing at 638 West Fourth Street in downtown Winston-Salem. Their website (www.foohillsbrewing.com) notes that "...drinking truly fresh beer is one of the greater pleasures in life." We don't know many geologists who would disagree with that statement. Their website notes that several of the dishes on their food menu incorporate Foothills brews into the recipes.

If you plan to attend either of these social events, please email Rick Kolb at rkolb0915@aol.com. We welcome your comments and ideas for other types of social events.



EOS Remediation

NATURAL, SCIENCE-DRIVEN SOLUTIONS

- Patented Methods for *In Situ* Bioremediation
- Featuring AquaBupH™ for Optimal Immediate and Long-Term Dechlorination with *In Situ* pH Adjustment

Please call for a consultation ► ► ► Bioremediation Products • Technical Support
Tel: 888.873.2204 • www.EOSRemediation.com

PRELIMINARY ANNOUNCEMENT FOR A SHALE GAS SYMPOSIUM IN RALEIGH

By Rick Kolb, Duncklee & Dunham

The Carolinas Section has begun planning for a one- or two-day symposium on shale gas that we will hold in the second half of 2012. Most of you have probably heard about the controversy about this technology (See article in Summer 2011 GeoNews for some background information and links). Be aware there are many opportunities for consultants to be a part of this industry.

We plan to invite the speakers so that all sides of the technology are presented in a balanced manner. The American Ground Water Trust, which is organizing a similar symposium in Texas, will help us organize our symposium. We have made tentative plans to hold the symposium at the Nature Research Center (to open in April 2012) of the North Carolina Museum of Natural Sciences in downtown Raleigh.

We expect attendees from throughout the Southeast will attend, and they will represent many sectors of society. Are you interested in helping to plan this event? If so, contact Brian Smith at (919) 768-9917 or c.brian.smith@amec.com, or Rick Kolb at (919) 858-9898 or rkolb0915@aol.com.

HAITIAN WELL PROJECT UPDATE

By Dave Duncklee, Duncklee & Dunham

This is a followup on the ongoing project to help the Haitians construct drinking water wells at schools and orphanages in the country so devastated by hurricanes and earthquakes. AEG Carolinas, Duncklee & Dunham, Geologic Exploration, and Mid-Atlantic Associates have been instrumental in providing material assistance. This is the latest update sent to me from Doug and Susan Rakoczy.

"It has been a good week for the water project. Edrick (the native driller) and the team have been able to get another well almost finished. He is at 80 feet and will do another 10 or so before dropping the casing.

Rony has been out documenting Afridev pumps and then I need to get it all sent out to Lifewater Canada to be matched with donors. There were a few wells repaired, but mostly this was a drilling week.

It also rained quite a lot which makes it difficult to do repair. A 47,000 lb. container with the cable tool rig should be arriving in Cap Haitian this week!"

More information on this project is provided in articles in both the Spring and Summer 2011 issues of AEG Carolinas GeoNews. The pdf version is posted on our website, www.aegcarolinas.org.

(Winter AEG Carolinas Minutes, Continued from page 8)

Suggestions for location were the NCSCI museum Nature Research Center, in the 2nd half of 2012, and/or Green Square in April.

Shale Gas Symposium

- Brian Smith of AMEC (formerly MACTEC) will lead the effort. Rick reported that plans are well underway. Jim Simons, NC State Geologist, may help. Possibility is to hold it at DENR. Organizers are hoping to present a balanced viewpoint with their choice of speakers (See article this page).

- We would be able to get support from National for many of the logistics (i.e.: hotel, catering, etc.) Also for permitting.
- We are looking at the later part of next year for doing this. It may be scheduled for two days.

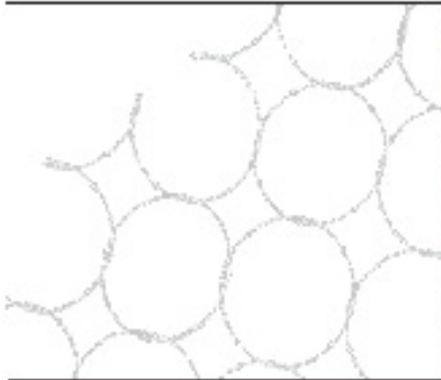
Update on sponsor renewals

- Jane reported that she sent out email renewal notices on December 2nd. Three renewals have come in already; one upgraded to Silver National sponsorship (Pyramid Environmental). Hard-copy renewal letters go out next week (Done 12/16/11). Recipients were encouraged to attend the January 26th meeting in Concord and bring their renewal checks at that time.

New business: Membership renewals.

- We all need to call our friends and have them send in their renewals soon. Ask sponsors to be members, too. (Done in the Sponsor renewal letter sent out 12/16/11)

	
Ground Water Sampling, Monitoring & Remediation Equipment	
David Hathaway – Office Manager DavidH@geotechnc.com Cell 919-757-9144 1-800-293-5325	
Geotech Environmental Equipment, Inc. 2517 Noblin Road, Suite 103 Raleigh, North Carolina 27604 Phone 919-876-1535 FAX 919-876-1260	
Corporate Headquarters 2650 East 40th Avenue Denver, Colorado 80205 1-800-833-7968 Phone 303-320-4764 FAX 303-322-7242 www.geotechnc.com	



Natural Hazard Solutions – Accomplish your priorities for hazard protection.

Systems engineered for maximum protection are not just products, but tested and proven solutions for:

- Debris flow
- Landslide
- Rockfall
- Slope instabilities
- Avalanche

Matching your cost-saving priorities for:

- Strength and durability
- Easy installation
- Simple maintenance

See more www.geobrugg.com



Geobrugg North America, LLC

Frank Amend, PE

Southeastern USA Regional Manager

PO Box 7453 • Rocky Mount, NC 27804-0453

Phone 252-937-2552 • Cell 252-904-6986

frank.amend@geobrugg.com

www.geobrugg.com



GSA 2012 Charlotte, NC

“Geosciences: Investing in the Future”

**2012 Geological Society of America
Annual Meeting and Exposition
November 4-7, 2012**

An Invitation to all AEG members...

Please help us to make the Charlotte GSA one to remember . . .

Take on a leadership role in the meeting by chairing a session, leading a short course, or organizing a field trip for participants or their guests.

**Submit a proposal for any of the above online
at www.geosociety.org starting the first week of October.**

Deadlines:

Contact For More Information

Field Trip Proposal: 1 December 2011

Missy Eppes meppes@uncc.edu

Topical Session Proposal: 10 January 2012

John Diemer jadiemer@uncc.edu

Short Course Proposal: 1 February 2012

Andy Bobyarchick arbobyar@uncc.edu

Abstract Deadline: 14 August 2012

Rob Young ryoung@email.wcu.edu



See you in Charlotte!



Enviro-Equipment, Inc.

Leading Supplier of Quality Environmental
Equipment and Supplies
1-888-274-8929



Aggressive Fluid Vapor Recovery Trailer (AFVR)

Enviro-Equipment, Inc. (EEI) is pleased to announce the construction of another Aggressive Fluid Vapor Recovery (AFVR) Trailer, also referred to as Dual Phase Extraction (DPE) and Mobile Multi-Phase Extraction (MMPE). While we have sold AFVR Trailers to clients in the past, we now plan to stock AFVR Trailer units for rental or subcontracting. Clients have the option for as little or as much assistance from EEI as they require. Options range from renting and operating the system yourself to subcontracting EEI to do your entire AFVR event.

Key Features of our AFVR Trailers Include:

- Dekker Oil Sealed Liquid Ring 300 SCFM @ 25" HG
- Epoxy Coated KO Tank with Float Tree for Automatic Transfer Pump Operation
- Progressive Cavity Transfer Pump with Manifold and Totalizing Flow Meter
- Manifold allows pumping from KO Tank to Storage Tank AND Pumping From Storage Tank through Totalizing Flow Meter to discharge point simply by adjusting valves
- Vapor Phase Carbon Drum for Off Gas Treatment
- Ultra Silent Diesel Generator, 230volt 3 Phase, Push Start, Auxiliary 115 and 230V Outlets
- Galvanized Steel Inlet Manifold, 3" Header, (7) 2" Zones with Ball Valve and Vacuum Gauge
- Multiple Sampling Ports
- UL Listed Control Panel

EEI also carries all of the necessary accessories for AFVR events including "tanker truck" cam lock hoses, vapor phase granulated activated carbon media, thermo anemometers, photoionization detectors (PID), flame ionization detectors (FID), well head assemblies and stinger piping.

EEI is your one stop shop for rental of pilot test equipment or full scale remediation systems. We also custom build remediation systems on skids, in trailers or in buildings to your specifications. EEI is a Met Lab Certified Control Panel shop.

Enviro-Equipment, Inc. is your full service center for AFVR Trailers. We build them, so we can maintain and repair them. Whether it's a unit we built, you built or someone else built, we are your one stop service center. Contact Evan Chew at our Remediation Division 1-888-855-8267 or email us at remediation@enviroequipment.com.

ENVIRO-EQUIPMENT, INC. "WHEN IT HAS TO WORK"

www.enviroequipment.com

SAEDACCO**THE ENVIRONMENTAL INDUSTRY SUPPORT SPECIALIST****Roto-Sonic Drilling Services**
saedacco.com

We're proud to announce that we will be taking delivery of a new Geoprobe® Model 8140LS Roto-Sonic Drill Rig

Key features of this machine are...

- * Geoprobe® GV4 Sonic Head w/ Oscillator Frequency 0-135 Hz
- * Full Rotational Drilling Capabilities w/ Head Tip Out 35 Degrees
- * Swing-Arm Control Panel w/ Advanced Diagnostics System
- * Variable Location Control Panel per Operator Preference & Safety
- * Digital Display Screen w/ Multi-Function Output
- * Advanced Warning Display Screens for Operator & Equipment Safety
- * Variable Speed Controls for Drilling Operations
- * Rear Stabilizer Blade and Drop Rack Tooling Systems
- * Maneuvered w/ Wireless or Tethered Remote Systems
- * Front Outriggers have 26" of travel (12" below tracks)
- * Rear Outriggers have 28" of travel (12" below tracks)
- * Breakout System w/ Clamps for Casing from 3" to 11"
- * Additional Features include GP50 Pressure Washer, SPX40 Hose Pump, FMC Triplex Pump and more!

To learn more about how the 8140LS can benefit your next project simply reply to this message or give us a call.

SAEDACCO also provides direct push, conventional drilling with truck and track-mounted drill rigs, UST removals and soil and groundwater remediation services.

saedacco.com



CALENDAR OF EVENTS - 2012

Geological Events in the Carolinas

Courtesy of AEG Carolinas Section – www.aegcarolinas.org. Last updated December 21, 2011

Send updates/corrections to Rick Kolb, Duncklee & Dunham, rkolb0915@aol.com.

Meeting Date, Time, and Location are Subject to Change – Please Verify Prior to the Meeting

Date: Tuesday, January 4, 2012 (meetings are held monthly on the first Tuesday of the month)

Event: Engineers Without Borders monthly meeting, Research Triangle Park Professional Chapter
Location: 6:30-8:00 PM at the offices of Camp Dresser & McKee; 5400 Glenwood Avenue, Suite 300; Raleigh
Contact: Sarah Kahn, snkahn@gmail.com

Date: Thursday, January 5, 2012

Event: Quarterly meeting of the North Carolina Board for the Licensing of Geologists
Location: Starts at 9:00 AM at 3733 Benson Drive in Raleigh; the morning session is open to the public
Contact: ncblg@bellsouth.net or Rick Kolb, rkolb0915@aol.com

Date: Thursday, January 19, 2012

Event: Second Carolinas Section Brewpub Social
Location: Bull City Burger and Brewery, 107 East Parrish Street, Durham, 6:00-7:30+
Contact: Adam Phillips, adam.phillips@sgs.com or Rick Kolb, rkolb0915@aol.com

Date: Thursday, January 19, 2012 (meetings are held monthly on the third Thursday of the month)

Event: South Carolina Association of Environmental Professionals monthly meeting
Location: 6:30 PM social, 7:00 presentation at Edens & Avant, 1221 Main Street; Columbia, North Carolina
Details: Craig Dukes, GEL Engineering, craig.dukes@gel.com

Date: Sunday, January 22, 2012

Event: Reg Review course for the Spring 2012 ASBOG exam for geologists, \$495 + \$16 shipping
Location: 8:00 AM-4:00 PM at the Holiday Inn RDU, 930 Airport Boulevard, Morrisville, North Carolina
Details: www.regreview.com

Date: Thursday, January 26, 2012

Event: Carolinas Section Winter Meeting
Location: 6:00-9:00 PM; Dave & Buster's, Concord Mills Mall; Concord, North Carolina
Speaker: John Adams Hodge, P.G., J.D.
Topic: Money for Nothing, PG's for Free: A Practical Review of Legal Developments in Geoscience Practice (See article on page 4)
RSVP to Brad Worley – brad.worley@summit-engineer.com – no later than January 23.

Date: Tuesday, February 7, 2012

Event: Engineers Without Borders monthly meeting, Research Triangle Park Professional Chapter
Location: 6:30-8:00 PM at the offices of Camp Dresser & McKee; 5400 Glenwood Avenue, Suite 300; Raleigh
Contact: Sarah Kahn, snkahn@gmail.com

Date: Wednesday, February 8, 2012

Event: NC State University Geology Club meeting
Location: Room 1132, Jordan Hall, NC State campus
Speaker: Ben Brulet, NC State grad who works for Chesapeake Energy, will talk about careers in the oil industry
Contact: Earl Wells, Geology Club President, earl-wells82@gmail.com

Date: Thursday, February 16, 2012

Event: South Carolina Association of Environmental Professionals monthly meeting
Location: 6:30 PM social, 7:00 presentation at Edens & Avant, 1221 Main Street; Columbia, North Carolina
Details: Craig Dukes, GEL Engineering, craig.dukes@gel.com

Date: Thursday, February 23, 2012

Event: Third Carolinas Section Brewpub Social
Location: Foothills Brewery, 636 West Fourth Street, Winston-Salem, 6:00-7:30+
Contact: Adam Phillips, adam.phillips@sgs.com or Rick Kolb, rkolb0915@aol.com

Date: Tuesday, March 6, 2012

Event: Engineers Without Borders monthly meeting, Research Triangle Park Professional Chapter
Location: 6:30-8:00 PM at the offices of Camp Dresser & McKee; 5400 Glenwood Avenue, Suite 300; Raleigh
Contact: Sarah Kahn, snkahn@gmail.com

Date: March 6-7, 2012

Event: Third Biennial Southeastern *In Situ* Soil and Groundwater Remediation Conference
Location: Renaissance Hotel, North Hills, Raleigh, North Carolina (see flyer on pages 12-13)
Cost: \$250, @200 for AEG members and students
Details: www.redox-tech.com/conference

Date: Thursday, March 8, 2012

Event: Ground Water Professionals of North Carolina Spring Meeting and Elections
Location: 6:00 PM social, 7:00 dinner, 8:00 presentation at Natty Green's, Greensboro
Speaker and Topic: To be announced

Date: Thursday, March 15, 2012

Event: South Carolina Association of Environmental Professionals monthly meeting
Location: 6:30 PM social, 7:00 presentation at Edens & Avant, 1221 Main Street; Columbia, North Carolina
Details: Craig Dukes, GEL Engineering, craig.dukes@gel.com

(Continued on page 35)

(CALENDAR—Continued from page 34)

Date: Monday, March 26, 2012

Event: Presentation by Dr. Scott Burns,
2011-12 Jahns Lecturer

Location: College of Charleston; Charleston, South Carolina
Details: To be announced

Date: Tuesday, March 27, 2012

Event: Presentation by Dr. Scott Burns,
2011-12 Jahns Lecturer

Location: University of South Carolina, Columbia
Details: To be announced

Date: Wednesday, March 28, 2012

Event: Presentation by Dr. Scott Burns,
2011-12 Jahns Lecturer

Location: University of North Carolina at Wilmington
Details: To be announced

Date: Thursday, March 29, 2012

Event: Presentation by Dr. Scott Burns,
2011-12 Jahns Lecturer

Location: University of North Carolina State
Details: To be announced

Date: Thursday, March 29, 2012

Event: Carolinas Section Spring Meeting

Location: Sparian's Bowling Boutique and Bistro, 141 Park
at North Hills Street, Raleigh

Speaker: Dr. Scott Burns, 2011-12 Jahns Lecturer

Topic: Cataclysms on Columbia; Great Missoula Floods

Contact: Rick Kolb, rkolb0915.aol.com

Date: Friday, March 30, 2012

Event: Presentation by Dr. Scott Burns,
2011-12 Jahns Lecturer

Location: University of North Carolina at Charlotte
Details: To be announced

Date: March 31-April 2, 2012

Event: Geological Society of America Southeastern Section
Annual Meeting

Location: Renaissance Hotel; downtown Asheville, North
Carolina

Date: April 13-29, 2012

Event: North Carolina Science Festival

Location: Events across the state

Details: www.ncsciencefestival.org

Date: September 15-23, 2012

Event: AEG Annual Meeting

Location: Hilton Hotel; Salt Lake City, Utah

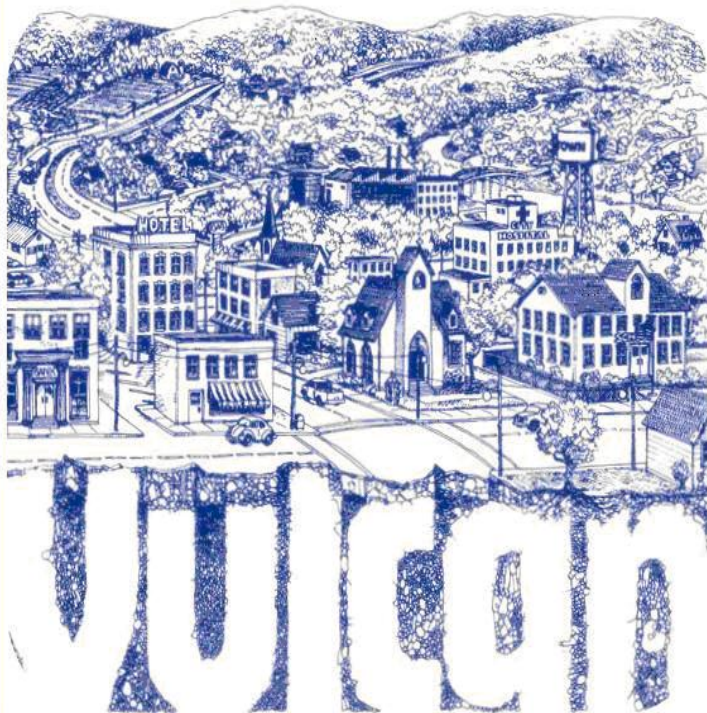
(see details as they unfold at www.aegweb.org)

Date: November 4-7, 2012

Event: Geological Society of America Annual Meeting

Location: Charlotte Convention Center; Charlotte, North
Carolina

Foundations of the community.



Vulcan
Materials Company

*The nation's leading producer
of crushed stone.*

Mideast Division

4401 Patterson Avenue
Winston-Salem, NC 27105
336.767.4600

www.vulcanmaterials.com



Student and New Graduate Member Application

Let the Association of Environmental & Engineering Geologists (AEG) show you the great benefits to being a part of the geology profession! **AEG is geology in practice.** Join us and see why our members LOVE their jobs!

Benefits of Student Membership Include:

- Eligibility for **Scholarships** that provide funding for field camp, field studies, academic studies and travel to present at national meetings.
- Discounts** for attending AEG's Annual and local Section Meetings, field trips, and short courses (sometimes you can attend for **FREE**).
- Networking** opportunities to potentially meet **YOUR** future employer! One member noted, "Every job I have had was a result of shaking hands at an AEG event!"
- Free online access** to *Environmental & Engineering Geoscience*, co-published with the Geological Society of America, *AEG NEWS*, and *AEG's Annual Meeting Program with Abstracts*.
- STUDENT MEMBERSHIP IS FREE!**
- PLUS**, as AEG's gift to you for graduating, your first year of Professional Membership is **FREE!**



Application Form

NAME: _____

Preferred Address: _____

Phone: _____

E-mail: _____

Please check one: ☐ Student ☐ New Graduate

Submission: Send this form to:
 Association of Environmental & Engineering Geologists,
 PO Box 460518, Denver, CO 80246
 Phone: 303-757-2926; FAX: 303-757-2969;
 Email: aeg@aegweb.org; Website: www.aegweb.org

MEMBERSHIP REQUIREMENTS

MEMBER: Applicants for Member Class shall hold a degree in geology, engineering geology or geological engineering, or a degree in a related professional field with 30 semester-hours of credit in the geosciences. In addition an applicant shall be practicing in the field of Engineering Geology, Environmental Geology or Hydrogeology. Annual Dues for new (first-time) Members = \$75.00 per year for the first year of membership. Otherwise Annual Dues = \$115.00. Applicants who qualify for Member Class, but are engaged in full-time teaching at the Primary, Secondary or post-secondary level are eligible for Teacher Status (Annual Dues = \$35.00).

AFFILIATE: Applicants for Affiliate Member Class shall be scientists or engineers who work with engineering geologists; teachers engaged in middle-school and high school Earth Science education; or persons interested in engineering geology. Annual Dues = \$75.00 (Teacher Dues = \$35.00)

STUDENT: Applicants for Student Member Class shall be full-time students enrolled in an academic program in the geosciences or in a related field in engineering. Annual Dues = FREE.

INTERNATIONAL: Applicants shall hold the same requirements as for Member Class, but may select from the following dues schedule: \$35, which includes the *Environmental and Engineering Geology Journal*; \$45 with the *Journal*, the *Annual Directory* and the *Annual Meeting Abstracts*; or \$55 with the *Journal*, *Annual Directory*, *Annual Meeting Abstracts* and the *AEG News*.

AEG memberships are based on calendar year. Applications received after October 1 will be entered for following calendar year.

APPLICATION FORM

Please complete this form and mail it with your Annual Dues payment to the Association's Headquarters office for processing. New member applicants do not pay Section dues for their initial year of membership.

Name: _____
(Please print your name as you would like it shown on your membership certificate.)

PREFERRED ADDRESS: _____

WORK PHONE: _____ FAX: _____

PREFERRED E-MAIL: _____

Second Address: _____

Home Phone: _____

DESIRED CLASS OF MEMBERSHIP: _____ ANNUAL DUES AMOUNT: _____

CERTIFICATION: _____

(Signature)

My signature attests that, to the best of my knowledge, I meet the academic and practice requirements for the membership class I have requested and that all entries on this application are true and correct. I also authorize AEG to charge my credit card for the dues payment, if I selected the credit card payment option.

☐ Enclosed is my check for the amount of Annual Dues of \$ _____

Credit Card Payment Option

☐ Discover ☐ Master Card ☐ Visa Amount of Dues to be charged to my card = \$ _____

Card Number: _____ Expiration Date: _____

SUBMISSION: Send this form with your check or credit card authorization to:
Association of Environmental & Engineering Geologists, PO Box 460518, Denver, CO 80246
Phone: 303-737-2926; FAX: 303-737-2969; AEG Web: www.aegweb.org

IF YOU HAVEN'T RENEWED
YOUR MEMBERSHIP,
PLEASE DO IT NOW!
WE NEED YOU!
WWW.AEGWEB.ORG



At Nicholson Construction Company,
we specialize in deep foundations,
earth retention, ground treatment and
ground improvement techniques that
help you achieve your project goals.
Nicholson...the support you need.

To learn more, visit us at
www.nicholsonconstruction.com

MICROPILES

ANCHORS

GROUTING

AUGERCAST PILES

SOIL NAIL WALLS

SOIL MIXING

DIAPHRAGM WALLS

VIBRO TECHNOLOGIES



AEG CAROLINAS SECTION – SPONSOR INFORMATION

The Carolinas Section of AEG supports many of its activities with financial assistance provided by our sponsors. Our activities include quarterly meetings, periodic field trips and seminars, a quarterly newsletter, and email announcements about our meetings and geoscience related activities. In addition, we donate large quantities of educational resources to science teachers.

We offer several levels of sponsorship, but they all have one goal: to keep the sponsor's name in front of our members and to bring you business. We have a real commitment to connecting our sponsors to potential buyers and will do all we can to help you build your business. Most of our members are practicing professionals with responsibility for selecting subcontractors, so our group is a great place to find new customers and to catch up with existing clients in an informal setting.

Our sponsors provide the financial support that allows us to have reasonably priced dinner meetings, host seminars, provide discounted dinner meeting costs for students and teachers, underwrite the cost of newsletters and our web site, provide geoscience mentors for students and young professionals, and support science education tools to our teachers and in our schools. All costs listed below are per year and end in December. New sponsorships received after October will continue to December of the following year.

Silver Sponsor (\$250):

GeoNews Newsletter: Business card size ad (2" high x 3-1/2" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign-in table. Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibits: Space for tabletop display at one meeting. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG Carolinas Section email announcement (our email list is currently over 1,000 people)

Web Page: Acknowledgement on the AEG Carolinas Section Web Page, www.aegcarolinas.org, with a link to your site.

Gold Sponsor (\$375):

GeoNews Newsletter: Quarter-Page ad (4-1/2" high x 3-1/2" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign in table. Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibits: Space for tabletop display at two meetings. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG Carolinas Section email announcement (our email list is currently over 1,000 people)

Web Page: Acknowledgement on the AEG Carolinas Section Web Page, www.aegcarolinas.org, with a link to your site.

Platinum Sponsor (\$500):

GeoNews Newsletter: Half-page ad (4-1/2" high x 7" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign in table. Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibit: Space for tabletop display at three meetings. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG - Carolinas Section email announcement (our email list is currently over 1,000 people)

Web Page: Acknowledgement on the AEG Carolinas Section Web Page, www.aegcarolinas.org, with a link to your site.

Platinum PLUS Sponsor (\$600):

Same as Platinum, but with a FULL PAGE ad in GeoNews. Limited to 2 Sponsors per year.

GeoNews Newsletter Sponsorship Only

Businesses or individuals can also advertise in GeoNews without being a full sponsor. The annual rates for advertising in GeoNews are as follows:

Business Card	\$ 40.00
Quarter Page	\$ 60.00
Half Page	\$ 100.00
Full Page	\$ 200.00

Please complete the form below and mail to Jane Gill-Shaler, AEG Carolinas newsletter editor. Please call or email if you have any questions (contact information below).

AEG Carolinas Section Sponsorship Form

Please begin our sponsorship of the Carolinas Section of the Association of Engineering Geologists. Our sponsorship level is:

- _____ Platinum PLUS Section Sponsorship, \$600/year
 _____ Platinum Section Sponsorship, \$500/year
 _____ Gold Section Sponsorship, \$375/year
 _____ Silver Section Sponsorship, \$250/year
 _____ GeoNews Newsletter Sponsor Only (see above)

Name: _____

Address: _____

City, State, Zip: _____

Phone: _____ Fax: _____

Contact Person: _____

Cell: _____

Email: _____

Website URL: _____

Date of Payment: _____

Something about your company (use back of page for more room) _____

Please enclose a business card or email ad in jpg, pdf, or doc to Jane Gill-Shaler at janehgillshaler@gmail.com.

MAKE CHECK OUT TO AEG CAROLINAS

Snail mail form and payment to:

Jane Gill-Shaler, AEG Carolinas Newsletter Editor
 1636 West Lexington Ave., High Point, NC 27262

(Modified 12/17/2011)

SPONSOR OR RENEW MEMBERSHIP AT WWW.AEGWEB.ORG!

Thank You, AEG Carolinas Sponsors!!

PLATINUM PLUS SPONSORS

Enviro-Equipment, Inc. Denise Chew, 704-588-7970, denise@enviro-equipment.com, www.enviroequipment.com; We are a Woman-Owned Small Business, staffed by experienced professionals, committed to providing quality environmental equipment and products for rent or sale at reasonable rates. EEI is a stocking distributor of numerous environmental products for detection of air, water, and soil contamination.

Geobrudd North America, Frank Amend, 257-937-2552, frank.amend@geobrudd.com, www.geobrudd.com; Geobrudd North America is a premier supplier of engineered rockfall protection and slope stabilization systems. Our wire-work-based, unobtrusive, and ecology-friendly systems blend well with the natural surroundings. Well-proven anti-corrosion processes permit achieving a useful life up to 100 years and our installed systems require virtually no maintenance.

PLATINUM SPONSORS

In-Situ Inc., Jason Evans, 1-800-446-7488 ext. 587, alockwood@in-situ.com, www.in-situ.com; In-Situ Inc. designs, manufactures, distributes, and rents environmental equipment for monitoring the quantity and quality of groundwater and surface water. From advanced aquifer characterization, to long-term monitoring, to economical data collection, In-Situ instruments provide accurate results and reliable operation even in harsh conditions. In-Situ Inc.'s headquarters are located in Fort Collins, Colo., USA. In-Situ offers world-class technical support 24 hours a day, 7 days a week. Please visit www.in-situ.com.

Pine Environmental Services, Inc., Paul Federline, 866-646-7463, pfederline@pine-environmental.com, www.pine-environmental.com; Pine Environmental Services, Inc., "The Environmental Supply and Support People" is the largest environmental supply and leasing company in North America. Pine is the leading provider of rental equipment in the nation with the latest instruments available. Pine Environmental Services, Inc. takes pride in their unprecedented customer support and competitive pricing. Extended hours of operation and after-hour emergency support are on hand.

SGS Environmental Services, Adam Phillips, 1-919-451-2553, Adam.Phillips@sgs.com, www.us.sgs.com/environment; SGS is one of the nation's top 20 laboratory operations and is committed to providing the best in analytical services. We are able to meet the ever-increasing needs of our clients by providing superior analytical data and customer service. SGS offers laboratory services covering the entire domain of environmental analysis of water, air, soil, and waste.

TRS Environmental, Susan Boutwell, 1-800-532-3381, Frederick.Love@trs-environmental.com, <http://www.trs-environmental.com>; We provide a wide variety of environ-

mental monitoring, sampling, and field and safety supplies for rent, lease, or sale.

Vulcan Materials Company, Mideast Division, Jim Stroud, 336-767-4600, stroudj@vmcmail.com, www.vulcanmaterials.com; Vulcan Materials Company provides essential infrastructure materials required by the U.S. economy. Vulcan is the nation's leading producer of construction aggregates: primarily crushed stone, sand and gravel.

GOLD SPONSORS

American Environmental Drilling, Guy Veni, 910-944-3140, guy@aedi.biz, www.aedi.biz; American Environmental Drilling, Inc. provides competitive full drilling services to North Carolina, South Carolina, and Virginia. Our services include: auger drilling, mud rotary, air rotary, geotechnical, geoprobe (direct push) and geothermal. Safety is a major factor in what we do and our drilling teams are fully trained and meet OSHA standards. We pride ourselves in being able to provide safe, reliable, fast, and efficient services. Our strong relationships with our clients allow us to understand their needs and be proactive in meeting their requirements. Cell: (910) 690-7569

Con-Test Analytical Laboratory, Tom Veratti, 617-640-4424, tveratti@contestlabs.com, www.contestlabs.com; Con-Test Analytical Laboratory is a full service environmental testing laboratory with over twenty years of experience performing air, soil, and water analysis. Con-Test prides itself on its commitment to data integrity and quality, made possible by our highly experienced staff and state of the art facility. Con-Test has one of the largest air labs in the country and is one of the few laboratories on the East Coast with AIHA and NELAP air certifications (PCBs, Vapor Intrusion, LEED).

EOS Remediation, LLC, Brad Elkins, 919-873-2204, www.eosremediation.com, info@eosremediation.com, 888-873-2204. EOS Remediation leads in producing scientifically-tested, field-proven products for Enhanced Anaerobic Bioremediation, Enhanced Aerobic Bioremediation and Bioaugmentation. EOS Remediation's products are specifically developed and designed for cost-effective, in situ treatment of groundwater.

ESC Lab Sciences, Barry Kroll, 800-767-5859, bkroll@esclabsciences.com, www.esclabsciences.com; ESC Lab Sciences is the only environmental laboratory certified to support your work nationwide from one location. No other lab is as accessible or prepared to handle your needs throughout the country.

Geophysical Survey Investigations, Mark Denil, 336-335-3174, denilm@bellsouth.net, www.geo-survey.net; Geophysical surveys for commercial, industrial and governments; GPR, EM, resistivity, and seismic.

Nicholson Construction Co., Gretchen Connelly, 412-221-4500, Gretchen.connelly@nicholsonconstruction.com, <http://www.nicholsonconstruction.com>; Nicholson is a versatile geotechnical contractor specializing in deep foundations, earth retention, ground treatment, and ground improvement. As the North American business unit of the Soletanche Bachy Group, one of the world's leading geotechnical contractors, we are part of a global network of geotechnical resources and expertise. We work in a wide range of industries and environments, from power plants and dams, to bridges and skyscrapers. Headquartered in Pittsburgh, Nicholson has offices around the country to address each region's unique geotechnical construction needs.

Our sponsors are a valuable resource for the funding of meetings, outreach and educational programs. Please honor their support by giving them your business. If you don't see your firm name here, contact our newsletter editor, Jane Gill-Shaler at janehgillshaler@gmail.com for sponsorship information, or fill out and mail the Sponsorship form elsewhere in this newsletter. You may also join online at www.aegweb.org.

(Continued on page 40)

Thank You, AEG Carolinas Sponsors!!

GOLD Sponsors (Continued from page 39)

Schnabel Engineering, Gary Rogers, 336-274-9456, grogers@schnabel-eng.com, www.schnabel-eng.com; Schnabel Engineering, Inc. is an ENR Top 10 geotechnical engineering firm. Schnabel offers highly specialized services in geotechnical engineering, geostuctural design, dam engineering, tunnel and underground engineering, environmental and applied geoscience services, construction inspection and testing, and resident engineering services.

SILVER SPONSORS

A & D Environmental Services, Inc., Scott Pearce, 336-803-1783, spearce@adenviro.com, www.adenviro.com; A & D Environmental Services, Inc., is a full-service environmental and industrial company offering remedial, industrial, emergency response, waste management, and transportation services throughout the southeast.

AE Drilling Services, Inc., Mark Lassiter, P.G., 864-288-1986, mlassiter@aedrilling.com, www.aedrilling.com; A.E. Drilling Services, LLC has been providing national clientele high quality environmental, geotechnical, mineral exploration, geothermal, and water supply drilling services since 1969.

ChemRem International, Travis Bowman, 704-725-5800, tbowman@chemrem.com, www.chemrem.com; ChemRem provides manufacturer representation service to the environmental remediation and restoration marketplace. ChemRem's focus is on products for chemical oxidation and bioremediation of organic contaminants present in soil, rock, groundwater, surface water, and wastewaters.

Choice Environmental, Nicole Manning, 919-369-1001, nicole@choice-enviro.com, www.choice-enviro.com; Choice Environmental Services, LLC. We carry or rent backpack & handheld GPS, EEM2000, TVA1000B, Survey Equipment, Generators, Laptops, anemometers, monsoon pumps, peristaltic pumps, bladder pumps, and we rent the Kawasaki Mule 3010.

EGIS, PA, Lynn Bressler, 919-929-8363, gwinvest@juno.com, www.waterwellvideos.com; Egis specializes in downhole geophysical and borehole video inspection services. We can assist in well development and rehabilitation.

Environmental Conservation Labs (ENCO), Jim Hays, 919-467-3090, jhays@encolabs.com, www.encolabs.com; ENCO is a network of full service environmental laboratories with analytical facilities in Cary, NC and Orlando and Jacksonville, FL. We support ESA projects, remediation, and short-and long-term monitoring programs. We analyze drinking water, wastewater, surface water, soil, sludge, air and other matrices.

Garco, Inc, Al King, 336-683-0911, alk@egarco.com, www.egarco.com; Garco, Inc. provides Environmental, Industrial, & Recycling Services.

Geologic Exploration, Inc., Jason Mantak, 704-872-7686, jmantak@gexnc.com, www.geologicexploration.com; Geologic Exploration is an environmental drilling company serving the southeast. We have been in business since the early '90's and specialize in monitoring and recovery wells. We also have experience in all types of injection wells.

Geotech Environmental Equipment, Inc., David Hathaway, 919-876-1535, davidh@geotechenv.com, www.geotechenv.com; Geotech Environmental Equipment, Inc. manufactures and distributes sampling, filtration, analytical and remediation products for the ground and surface water industry. We also rent, sell, and service environmental sampling and monitoring equipment.

Joyce Engineering, Inc., Hannu Kempainen, P.G., 336-323-0092, hannu@joyceengineering.com, www.joyceengineering.com; Joyce Engineering, Inc. is a leading consultant serving the waste industry for over twenty-five years. Our services include: Operator training; Operations consulting; Landfill Design & Permitting; Groundwater Remediation/ Monitoring; Landfill Gas Collection and Monitoring; Leachate Management; Air Quality Services; Construction Administration, & Construction Quality Assurance/ Quality Control. Joyce Engineering serves clients throughout the southeastern United States including local governments, private solid waste facilities, regional waste authorities, and industrial facilities.

KB Laboratories, Todd Romero, 352-367-0073, toddr@kbmobilelabs.com, www.kbmobilelabs.com; KB Laboratories, Inc. Our mission is to provide high quality mobile analytical and MIP direct sensing technology services meeting the on-site needs of engineering and consulting firms requiring rapid characterization of environmental contaminants.

Pace Analytical Inc., Korey Drew, 704-875-9092, korey.drew@pacelabs.com, www.pacelabs.com; Pace Analytical Services is a full service sampling and analytical testing firm operating a network of laboratories & service centers nationwide.

Parratt-Wolff, Inc., Butch Stevens, 800-627-7920, bstevens@pwinc.com, www.pwinc.com; Parratt-Wolff, Inc., is a full-service environmental and geotechnical drilling firm.

Prism Laboratories, Angela Overcash, 800-529-6364, aovercash@prismlabs.com, www.prismlabs.com; Since its inception in 1992, Prism Laboratories, a woman owned small business certified company, has been committed to providing the highest level of quality analytical services and technical support to our customers in the environmental monitoring, water quality and waste disposal market. Our team of highly qualified professionals is focused on ensuring on-time delivery of accurate and precise analytical results, while working one on one with our customers to provide customized service to suit each client's specific requirements. Prism Laboratories is NELAC and DOD accredited, holds State certifications throughout the Southeast and maintains an extensive list of accreditations and memberships pertinent to the analytical testing and environmental monitoring industry.

Pyramid Environmental, Doug Canavella, 336-335-3174, doug@pyramidenvironmental.com, pyramidenvironmental.com; Since 1990, as a professional, licensed engineering and geological firm, Pyramid has the expertise to research and analyze relevant environmental regulations, potential hazards, clean-up alternatives and environmental protection issues to design and implement solutions for environmental problems.

Regenesis, Drew Baird, PG, 864-240-9181, dbaird@regenesisc.com, www.regenesisc.com; Our mission is to develop, manufacture and market advanced, innovative technologies for the restoration or remediation of natural resources such as groundwater and soil. Regenesis' efforts are driven by and focused on technology performance, customer needs and cost-effectiveness. Looking forward, we will seek out and explore new technologies for the prevention and/or remediation of a broad range of environmental concerns.

SAEDACCO, Peter Byer, 803-548-2180, pbyer@saedacco.com, www.saedacco.com; South Atlantic Environmental Drilling and Construction Co, Inc., (SAEDACCO), founded in 1993, is a southeast regional environmental services company. SAE-DACCO is located in Fort Mill, SC and specializes in providing Direct Push, Drilling Construction, and Remediation services.